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(54) Title: COMPOSITIONS AND METHODS FOR THE MODIFICATION OF GENE TRANSCRIPTION

(57) Abstract

Novel isolated polynucleotides that encode plant transcription factors are provided, together with DNA constructs comprising such polynucleotides. Methods for using such constructs in modulating the expression of endogenous and/or heterologous genes are also disclosed, together with transgenic plants comprising such constructs.

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COMPOSITIONS AND METHODS FOR THE MODIFICATION OF GENE TRANSCRIPTION

Technical Field of the Invention

5 This invention relates to compositions isolated from plants and their use in the modification of gene transcription and/or expression. More specifically, this invention relates to plant polynucleotide sequences encoding transcription factors that are components of the cellular transcription apparatus and the use of such polynucleotide sequences in the modification of gene expression.

Background of the Invention

10 Eucaryotic gene expression is regulated, in part, by the cellular processes involved in transcription. During transcription, a single-stranded RNA complementary to the DNA sequence to be transcribed is formed by the action of RNA polymerases. Initiation of transcription in eucaryotic cells is regulated by complex interactions between *cis*-acting DNA motifs, located upstream of the gene to be transcribed, and *trans*-acting protein factors. Among the *cis*-acting regulatory regions are sequences of DNA, termed promoters, which are located close to the transcription initiation site and to which RNA polymerase is first bound, either directly or indirectly. Promoters usually consist of proximal (*e.g.*, TATA box) and more distant elements (*e.g.*, CCAAT box). Enhancers are *cis*-acting DNA motifs which may be situated further up- and/or down-stream from the initiation site.

Both promoters and enhancers are generally composed of several discrete, often redundant, elements each of which may be recognized by one or more *trans*-acting regulatory proteins, known as transcription factors. Regulation of the complex patterns of gene expression observed both spatially and temporally, in all developing organisms, is thought to arise from the interaction of enhancer- and promoter-bound, general and tissue-specific transcription factors with DNA (Izawa T, Foster R and Chua NH, *J. Mol. Biol.* 230:1131-1144, 1993; Menkens AE, Schindler U and Cashmore AR, *Trends in Biochem. Sci.* 13:506-510, 1995). Developmental decisions in organisms as diverse as *Drosophila melanogaster*, *Saccharomyces cerevisiae*, *Arabidopsis thaliana* and *Pinus radiata* are regulated by transcription factors. These DNA-binding regulatory molecules

have been shown to control the expression of genes responsible for the differentiation of different cell types, for example, the differentiation of leaf trichomes and xylem tissue in *Arabidopsis thaliana*, formation of endoderm from embryonic cells in *Xenopus laevis* and the initiation of gene expression in response to environmental and phytohormonal stress in plants (Yanagisawa S and Sheen J, *The Plant Cell* 10:75-89, 1998).

Transcription factors generally bind DNA in a sequence-specific manner and either activate or repress transcription initiation. The specific mechanisms of these interactions remain to be fully elucidated. At least three separate domains have been identified within transcription factors. One is essential for sequence-specific DNA recognition, one for the activation/repression of transcriptional initiation, and one for the formation of protein-protein interactions (such as dimerization). Four motifs, or domains, involved in DNA sequence recognition and/or transcription factor dimerization have been identified to date: zinc fingers; helix-turn-helix; leucine zipper; and helix-loop-helix. Both helix-loop-helix and leucine zipper protein motifs have been implicated in the binding of transcription factors to DNA via their ability to readily form homo- or heterodimers *in vivo*. "Activating" domains are rich in either proline, glutamine or acidic amino acids. It has been proposed that this net negative region of the transcription factor interacts with the TATA box-binding transcription factor TFIID, RNA polymerase, and/or another protein associated with the transcription apparatus.

Studies indicate that many plant transcription factors can be grouped into distinct classes based on their conserved DNA binding domains (Katagiri F and Chua NH, *Trends Genet.* 8:22-27, 1992; Menkens AE, Schindler U and Cashmore AR, *Trends in Biochem. Sci.* 13:506-510, 1995; Martin C and Paz-Ares J, *Trends Genet.* 13:67-73, 1997). Each member of these families interacts and binds with distinct DNA sequence motifs that are often found in multiple gene promoters controlled by different regulatory signals. Several classes of transcription factors that have been identified to date are described below.

The basic/leucine zipper (bZIP) is a conserved family of transcription factors defined by a basic/leucine zipper (bZIP) motif (Landschultz et al., *Science* 240:1759-1764, 1988; McKnight, *Sci. Am.* 264:54-64, 1991; Foster et al., *FASEB J.* 8[2]:192-200, 1994). Transcriptional regulation of gene expression is mediated by both the bZIPs and other families of transcription factors, through the concerted action of sequence-specific transcription factors that interact with regulatory elements residing in the promoter

regions of the corresponding gene. The bZIP bipartite DNA binding structure consists of a region enriched in basic amino acids (basic region) adjacent to a leucine zipper that is characterized by several leucine residues regularly spaced at seven amino acid intervals (Vinson et al., *Science* 246:911-916, 1989). Whereas the basic region directly contacts the DNA, the leucine zipper mediates homodimerisation and heterodimerisation of protein monomers through a parallel interaction of the hydrophobic dimerization interfaces of two α -helices, resulting in a coiled-coil structure (O'Shea et al., *Science* 243:538-542, 1989; *Science* 254:539-544, 1991; Hu et al., *Science* 250:1400-1403, 1990; Rasmussen et al., *Proc. Natl. Acad. Sci. USA* 88:561-564, 1991).

Dof proteins are a relatively new class of transcription factor and are thought to mediate the regulation of some patterns of plant gene expression in part by combinatorial interactions between bZIP proteins and other types of transcription factors binding to closely linked sites. Such an example of this combinatorial interaction has been observed between bZIP and Dof transcription factors (Singh, *Plant Physiol.* 118:1111-1120, 1998). These Dof proteins possess a single zinc-finger DNA binding domain that is highly conserved in plants (Yanagisawa, *Trends Plant Sci.* 1:213, 1996). Specific binding of the Dof protein to bZIP transcription factors has been demonstrated and it has been proposed that this specific interaction results in the stimulation of bZIP binding to DNA target sequences in plant promoters (Chen et al., *Plant J.* 10:955-966, 1996). Examples of such Dof/bZIP interactions have been reported in the literature, including for example, the *Arabidopsis thaliana* glutathione S-transferase-6 gene (GST6) promoter which has been shown to contain several Dof-binding sites closely linked to the ocs element, a recognized bZIP binding site (Singh, *Plant Physiol.* 118:1111-1120, 1998).

The bZIP family of G-box binding factors from *Arabidopsis* (including GBF1, GBF2 and GBF3, for example) interact with the palindromic G-box motif (CCACGTGG). However, it has been demonstrated that the DNA binding specificity of such transcription factors, for example GBF1, may be influenced by the nature of the nucleotides flanking the ACGT core (Schindler et al., *EMBO J.* 11:1274-1289, 1992a). *In vivo* transient and transgenic plant expression studies have shown that these ACGT elements are necessary for maximal transcriptional activation and have been identified in a multitude of plant genes regulated by diverse environmental, physiological, and environmental cues. Classification of these transcription factors based upon their ability

to bind to the ACGT core motif yielded a relatively diverse group of proteins, including, for example the CamV 35S promoter as-1-binding protein which exhibits DNA binding site requirements distinct from those proteins interacting with the G-box (Tabata et al., *EMBO J.* 10:1459-1467, 1991). Thus, in addition to defining the individual classes of
5 bZIP proteins on the basis of their DNA binding specificity, such proteins can also be classified according to their heterodimerisation characteristics (Cao et al., *Genes Dev.* 5:1538-1552, 1991; Schindler et al., *EMBO J.* 11:1261-1273, 1992b).

Environmentally inducible promoters require the presence of two cis-acting elements, critical for promoter activity, one of which is the moderately conserved G-box (CCACGTGG) (deVetten et al., *Plant Cell* 4[10]:1295-1307, 1992). A mutation in one of
10 the two elements abolishes or severely reduces the ability of the promoter to respond to environmental changes. The sequence of the second cis-acting element, positioned near the G-box, is not conserved among different environmentally-inducible promoters, but may be similar among promoters induced by the same signal. The spacing between the
15 G-box and the second cis-acting element appears to be critical, suggesting a direct interaction between the respective binding factors (deVetten and Ferl, *Int. J. Biochem.* 26[9]:1055-1068, 1994; Ramachandran et al., *Curr. Opin. Genet. Dev.* 4[5]:642-646, 1994).

Basic helix-loop-helix zipper proteins represent an additional class of bZIP
20 transcription factors described in the literature and includes, for example, the Myc proteins. These proteins contain two regions characteristic of transcription factors: an N-terminal transactivation domain consisting of several phosphorylation sites, and a C-terminal basic helix-loop-helix (bHLH) leucine zipper motif known to mediate dimerization and sequence specific DNA binding via three distinct domains: the leucine
25 zipper, helix-loop-helix, and basic regions.

The Myb family of transcription factors is a group of functionally diverse transcriptional activators found in both plants and animals that is characterized by a conserved amino-terminal DNA-binding domain containing either two (in plant species) or three (in animal species) imperfect tandem repeats of approximately 50 amino acids
30 (Rosinski and Atchley, *J. Mol. Evol.* 46(1):74-83, 1998; Stober-Grasser et al., *Oncogene* 7[3]:589-596, 1992). Comparisons between the amino acid sequences of representative plant and mammalian MYB proteins indicate that there is a greater conservation between

the same repeat from different proteins, than between the R2 and R3 repeats from the same protein (Martin and Paz-Ares, *Trends Genet.* 13[2]:67-73, 1997). More than 100 MYB genes have been reported from *Arabidopsis thaliana* (Romero et al., *Plant J.* 14[3]:273-284, 1998), representing the largest regulatory gene family currently known in plants. DNA-binding studies have demonstrated that there are differences, but also frequent overlaps, in binding specificity among plant MYB proteins, in line with the distinct but often related functions that are beginning to be recognized for these proteins. Studies involving the eight putative base-contacting residues in MYB DNA binding domains have revealed that at least six are fully conserved in all plant MYB proteins identified to date and the remaining two are conserved in at least 80 % of these proteins (Martin and Paz-Ares, *Trends Genet.* 13[2]:67-73, 1997). Mutational analysis involving residues that do not contact bases have indicated that the sequence-specific binding capacity of MYBs is affected and this may account for some of the differences in the DNA-binding specificity between plant MYB proteins (Solano et al., *J. Biol. Chem.* 272[5]:2889-2895, 1997). This large-sized gene family may contribute to the regulatory flexibility underlying the developmental and metabolic plasticity displayed by plants.

Homeotic transcription factors have, in animals, been implicated in a number of developmental processes including, for example, the control of pattern formation in insects and vertebrate embryos and the specification of cell differentiation in many tissues (Ingham, *Nature* 335:25-34, 1988; McGinnis and Krumlauf, *Cell* 68:283-302, 1992). Homeodomain secondary structures are characterized by a distinctive helix-turn-helix motif initially identified in bacterial DNA binding domains. This helix-turn-helix sequence/structure motif spans approximately 20 amino acids and is characterized by two short helices separated by a sharp 90 degree bend or turn (Harrison and Aggarwal, *Ann. Rev. Biochem.* 59:933-969, 1990). This helix has been shown to bind in the major groove of the DNA helix.

Plant homeobox genes have been identified in a number of plant species including *Arabidopsis thaliana*, maize, parsley and soybean. Expression pattern analysis of maize homeobox gene family members suggests that these transcription factors may be involved in defining specific regions in the vegetative apical meristem, potentially involved in the initiation of leaf structures (Jackson et al., *Development* 120:405-413, 1994). Such

observations imply that the plant homeobox genes, as for the animal homeobox genes, may be involved in the determination of cell fate.

Homeodomain-zipper (HD-zip) represents an additional family of homeodomain proteins. These homeodomain-zipper proteins (HD-zip) possess both the characteristic homeodomain linked to an additional leucine zipper dimerization motif. This family includes, for example, Athb-1 and Athb-2 (Sessa et al., *EMBO J.* 12:3507-3517, 1993) and Athb-4 (Carabelli et al., *Plant J.* 4:469-479, 1993).

The LIM domain is a specialized double-zinc finger motif found in a variety of proteins, in association with domains of divergent functions, such as the homeodomain (see the sunflower pollen-specific SF3 transcription factor: Baltz et al., *Plant J.* 2:713-721, 1992; or forming proteins composed primarily of LIM domains: Dawid et al., *Trends Genet.* 14[4]:156-162, 1998). LIM domains interact specifically with other LIM domains and with many different protein domains. LIM domains are thought to function as protein interaction modules, mediating specific contacts between members of functional complexes and modulating the activity of some of the constituent proteins. Nucleic acid binding by LIM domains, while suggested by structural considerations, remains an unproven possibility. However, it is possible that together with the homeodomain, the LIM domain could bind to the regulatory regions of developmentally controlled genes, as has been proposed for the paired box, a conserved sequence motif first identified in the paired (PRD) and gooseberry (GSB) homeodomain proteins from *Drosophila* (Triesman et al., *Genes Dev.* 5:594-604, 1991). The PRD box is also able to bind DNA in the absence of the homeodomain. LIM-domain proteins can be nuclear, cytoplasmic, or can shuttle between compartments. In the animal systems, several important LIM proteins have been shown to be associated with the cytoskeleton, having a role in adhesion-plaque and actin-microfilament organization. Among nuclear LIM proteins, the LIM homeodomain proteins form a major subfamily with important functions in cell lineage determination and pattern formation during animal development.

The AP2 (APETALA2) and EREBPs (ethylene-responsive element binding proteins) are the prototypic members of a family of transcription factors unique to plants, whose distinguishing characteristic is that they contain the so-called AP2 DNA-binding domain. AP2/EREBP genes form a large multigene family, and they play a variety of roles throughout the plant life cycle: from being key regulators of several developmental

processes, like floral organ identity determination or control of leaf epidermal cell identity, to forming part of the mechanisms used by plants to respond to various types of biotic and environmental stress. In *Arabidopsis thaliana*, the homeotic gene *APETALA2* (*AP2*) has been shown to control three salient processes during development: (1) the specification of flower organ identity and the regulation of floral organogenesis (Jofuku et al., *Plant Cell* 6:1211-1225, 1994); (2) establishment of flower meristem identity (Irish and Sussex, *Plant Cell* 2[8]:741-753, 1990); and (3) the temporal and spatial regulation of flower homeotic gene activity (Drews et al., *Cell* 65[6]:991-1002, 1991). DNA sequence analysis suggests that *AP2* encodes a theoretical polypeptide of 432 aa, with a distinct 68 aa repeated motif termed the *AP2* domain. This domain has been shown to be essential for *AP2* functions and contains within the 68 aa, an eighteen amino acid core region that is predicted to form an amphipathic α -helix (Jofuku et al., *Plant Cell* 6:1211-1225, 1994). *AP2*-like domain-containing transcription factors have been also been identified in both *Arabidopsis thaliana* (Okamuro et al., *Proc. Natl. Acad. Sci. USA* 94:7076-7081, 1997) and in tobacco with the identification of the ethylene responsive element binding proteins (EREBPs) (Ohme-Takagi and Shinshi, *Plant Cell* 7[2]:173-182, 1995). In *Arabidopsis*, these *RAP2* (related to *AP2*) genes encode two distinct subfamilies of *AP2* domain containing proteins designated *AP2*-like and *EREBP*-like (Okamuro et al., *Proc. Natl. Acad. Sci. USA* 94:7076-7081, 1997). *In vitro* DNA binding has not been shown to date using the *RAP2* proteins; however, based upon the presence of two highly conserved motifs YRG and RAYD within the *AP2* domain, it has been proposed that binding DNA binding occurs in a manner similar to that of *AP2* proteins.

Zinc finger domains of the type Cys₂His₂ appear to represent the most abundant DNA binding motif in eukaryotic transcription factors, with several thousand being identified to date (Berg and Shi, *Science* 271[5252]:1081-1085, 1996). A structural role for zinc in transcription factors was initially proposed in 1983 for the transcription factor IIIA (TFIIIA) (Hanas et al., *J Biol. Chem.* 258[23]:14120-14125, 1983). The Cys₂His₂ Zinc finger domains are characterized by tandem arrays of sequences of C-x(2,4)-C-x(3)-[LIVMFYWC]-x(8)-H-x(3,5)-H (where X represents a variable amino acid). Structurally, the zinc finger consists of two antiparallel β strands followed by an α helix (Lee et al., *Science* 245[4918]:635-637, 1989). This structural arrangement allows for the cysteine and histidine side chains to coordinate the zinc with the three other conserved residues

forming the hydrophobic core adjacent to the metal coordination unit (Berg and Shi, *Science* 271[5252]:1081-1085, 1996). Many proteins possessing a Cys₂His₂ domain have been shown to interact with DNA in a sequence-specific manner. Crystal structure analysis of the mouse transcription factor Zif268 bound to a specific DNA target indicates
5 that the zinc fingers in the protein/DNA complex reside in the major groove of the double helix and interacts with the DNA bases through amino acid side chains referred to as the contact residues (Pavletich and Pabo, *Science* 252[5007]:809-817, 1991). The orientations of the zinc finger domains with respect to the DNA are usually identical, with each domain contacting a contiguous 3-base pair subsite, the majority of which are directed to
10 one strand. There are few interdomain interactions and the DNA recognition by each zinc finger appears to be largely independent of the other domains (Berg and Shi, *Science* 271[5252]:1081-1085, 1996).

The CCAAT-box element identified by Gelinas et al. (*Nature* 313[6000]:323-325, 1985) has been shown to occur between 80 bp and 300 bp from the transcription
15 start site and may operate in either orientation, with possible cooperative interactions with multiple boxes (Tasanen et al., *J Biol. Chem.* 267[16]:11513-11519, 1992); or other conserved motifs (Muro et al., *J. Biol. Chem.* 267[18]:12767-12774, 1992; Rieping and Schoffl, *Mol. Gen. Genet.* 231[2]:226-232, 1992). CCAAT-box related motifs have been identified in a number of promoters in a variety of organisms including yeast (Hahn et al.,
20 *Science* 240[4850]:317-321, 1988), rat (Maity et al., *Proc. Natl. Acad. Sci. USA* 87[14]:5378-5382, 1990; Vuorio et al., *J. Biol. Chem.* 265[36]:22480-22486, 1990); and plants (Rieping and Schoffl, *Mol. Gen. Genet.* 231[2]:226-232, 1992; Kehoe et al., *Plant Cell* 6[8]:1123-1134, 1994). In both yeast and vertebrates, a protein complex has been shown to bind to the CCAAT-motif. In yeast the complex consists of three proteins,
25 known as HAP2, HAP3 and HAP5 (Pinkham and Guarente, *Mol. Cell. Biol.* 5[12]:3410-3416, 1985).

MADS box transcription factors interact with a conserved region of DNA known as the MADS box. All MADS box transcription factors contain a conserved DNA-binding/dimerization region, known as the MADS domain, which has been identified
30 throughout the different kingdoms (Riechmann and Meyerowitz, *Biol. Chem.* 378[10]:1079-1101, 1997). Many of the MADS box genes isolated from plants are expressed primarily in floral meristems or floral organs, and are believed to play a role in

either specifying inflorescence and floral meristem identity or in determining floral organ identity. One class of regulatory genes responsible for floral meristem identity and the pattern of meristem development includes the genes *APETALA1* (*API*), *APETALA2* (*AP2*), *CAULIFLOWER* (*CAL*), *LEAFY* (*LFY*) and *AGAMOUS* (*AG*) from *Arabidopsis thaliana*. Both *LFY* and *API* have been shown to encode putative transcription factors (Weigel et al., *Cell* 69:843-859, 1992), with *API* and *AG* each encoding putative transcription factors of the MADS box domain family (Yanofsky et al., *Nature* 346:35-39, 1990). Mutations in the *Lfy* gene have been shown to result in a partial conversion of flowers into inflorescence shoots.

Summary of the Invention

Briefly, the present invention provides polynucleotides isolated from plants that encode transcription factors, together with polypeptides encoded by such polynucleotides. The isolated polynucleotides and polypeptides of the present invention may be usefully employed in the modification of gene expression in plants, since both tissue- and temporal-specific gene expression patterns have been shown to be governed by transcription factors during the natural development of a plant. The inventive polynucleotides and polypeptides may thus be employed in the manipulation of plant phenotypes.

In a first aspect, the present invention provides polynucleotides isolated from eucalyptus and pine which encode transcription factors, including transcription factors from the following families of regulatory proteins: bZIP, bZIP family of G-box binding factors; basic helix-loop-helix zipper (bHLH); homeotic/homeodomain/homeobox/MADS; homeodomain zipper (ZIP); LIM domain; AP2 and EREBs; zinc finger domains of type Cys2His2; CCAAT box elements; and MYB. In one embodiment, the isolated polynucleotides of the present invention comprise a DNA sequence selected from the group consisting of: (a) sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; (b) complements of the sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; (c) reverse complements of the sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; (d) reverse sequences of the sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106;

and (e) sequences having either 40%, 60%, 75% or 90% identical nucleotides, as defined herein, to a sequence of (a) – (d).

In a further aspect, isolated polypeptides encoded by an inventive DNA sequence are provided. In specific embodiments, such polypeptides comprise an amino acid
5 sequence selected from the group consisting of: (a) sequences provided in SEQ ID NOS: 592-1182, 1913-1930 and 2107-2278; and (b) polypeptides comprising sequences having either 60%, 75%, 90% or 95% identity, as defined herein, to a sequence of (a).

In another aspect, the present invention provides polypeptides isolated from eucalyptus and pine which comprise transcription factor DNA-binding domains. In
10 specific embodiments, such polypeptides comprise an amino acid sequence selected from the group consisting of: (a) sequences provided in SEQ ID NOS: 2279-2293 and 2296-2368; and (b) sequences having either 60%, 75%, 90% or 95% identical residues, as defined herein, to a sequence of (a).

In yet a further aspect, the invention provides DNA constructs comprising a
15 polynucleotide of the present invention, either alone, in combination with one or more other polynucleotides disclosed herein, or in combination with one or more known DNA sequences, together with transformed cells comprising such constructs.

In a related aspect, the present invention provides DNA constructs comprising, in the 5'-3' direction, a gene promoter sequence; an open reading frame coding for at least a
20 functional portion of a polypeptide encoded by an inventive polynucleotide, or a variant thereof; and a gene termination sequence. The open reading frame may be orientated in either a sense or antisense direction. DNA constructs comprising an untranslated, or non-coding, region of a gene coding for a transcription factor polypeptide of the present invention or a nucleotide sequence complementary to an untranslated region, together
25 with a gene promoter sequence and a gene termination sequence, are also provided. Preferably, the gene promoter and termination sequences are functional in a host plant. Most preferably, the gene promoter and termination sequences are those of the original genes but others generally used in the art, such as the Cauliflower Mosaic Virus (CMV) promoter, with or without enhancers such as the Kozak sequence or Omega enhancer, and
30 *Agrobacterium tumefaciens* nopal synthase terminator may be usefully employed in the present invention. Tissue-specific promoters may be employed in order to target

expression to one or more desired tissues. The DNA construct may further include a marker for the identification of transformed cells.

In a further aspect, transgenic cells comprising the genetic constructs of the present invention are provided, together with organisms, such as plants, comprising such transgenic cells, and fruits, seeds and other products, derivatives, or progeny of such plants. Propagules of the inventive transgenic plants are included in the present invention. As used herein, the word "propagule" means any part of a plant that may be used in reproduction or propagation, sexual or asexual, including cuttings.

Plant varieties, particularly registrable plant varieties according to Plant Breeders' Rights, may be excluded from the present invention. A plant need not be considered a "plant variety" simply because it contains stably within its genome a transgene, introduced into a cell of the plant or an ancestor thereof.

In yet another aspect, methods for modifying gene expression in a target organism, such as a plant, are provided, such methods including stably incorporating into the genome of the organism a DNA construct of the present invention. In a preferred embodiment, the target organism is a plant, preferably a woody plant, more preferably selected from the group consisting of eucalyptus and pine species, and most preferably from the group consisting of *Eucalyptus grandis* and *Pinus radiata*. In a related aspect, a method for producing a target organism, such as a plant, having modified gene expression is provided, the method comprising transforming a plant cell with a DNA construct of the present invention to provide a transgenic cell and cultivating the transgenic cell under conditions conducive to regeneration and mature plant growth.

In yet a further aspect, the present invention provides methods for modifying the activity of a transcription factor in a target organism, such as a plant, comprising stably incorporating into the genome of the plant a DNA construct of the present invention. In a preferred embodiment, the target plant is a woody plant, preferably selected from the group consisting of eucalyptus and pine species, most preferably from the group consisting of *Eucalyptus grandis* and *Pinus radiata*.

The above-mentioned and additional features of the present invention and the manner of obtaining them will become apparent, and the invention will be best understood by reference to the following more detailed description. All references

disclosed herein are hereby incorporated by reference in their entirety as if each was incorporated individually.

Detailed Description of the Invention

5 The present invention provides isolated polynucleotides that encode plant transcription factors. As discussed above, transcription factors are components of the cellular "transcription apparatus" and are involved in the regulation of gene expression. Transcription factors are known to play a critical role in the growth and development of plants, and in cellular responses to external stimuli, such as environmental factors and
10 disease pathogens. Transformation of plants with polynucleotides that encode proteins involved the cellular transcription process may thus be employed to modify properties such as lignin deposition, flower development, male and female sterility.

 Using the methods and materials of the present invention, the amount of a specific transcription factor may be increased or reduced by incorporating additional copies of
15 genes or a fragments of said genes encoding the transcription factor into the genome of a target organism, such as a plant. Similarly, an increase or decrease in the amount of the transcription factor may be obtained by transforming the target plant with antisense copies of such genes.

 In one embodiment, the present invention provides isolated polynucleotides
20 encoding, or partially encoding, plant transcription factors that are involved in the regulation of gene expression. The polynucleotides of the present invention were isolated from forestry plant sources, namely from *Eucalyptus grandis* and *Pinus radiata*, but they may alternatively be synthesized using conventional synthesis techniques. In specific embodiments, isolated polynucleotides of the present invention comprise a sequence
25 selected from the group consisting of sequences identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; complements of the sequences identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; reverse complements of the sequences identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; reverse sequences of the sequences identified as
30 SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; at least a specified number of contiguous residues (x-mers) of any of the above-mentioned polynucleotides; extended sequences corresponding to any of the above polynucleotides; antisense sequences

corresponding to any of the above polynucleotides; and variants of any of the above polynucleotides, as that term is described in this specification.

In another embodiment, the present invention provides isolated polypeptides encoded by the DNA sequences of SEQ ID NOS: 1-591, 1895-1912 and 1931-2106. In
5 certain specific embodiments, such isolated polypeptides include a sequence selected from the group consisting of SEQ ID NOS: 592-1182, 1913-1930 and 2107-2278.

The polynucleotides and polypeptides of the present invention were putatively identified by DNA and polypeptide similarity searches. The inventive polynucleotides and polypeptides have demonstrated similarity to transformation factors that are known to
10 be involved in regulation of transcription and/or expression in plants. The putative identities of the inventive polynucleotides are shown below in Table 1.

TABLE I

Transcription factor family	Polynucleotide SEQ ID NO:
Basic leucine zipper (bZIP)	133, 148, 194, 206, 246, 258, 261, 265, 279, 284, 285, 286, 290, 294, 303, 318, 331, 455, 470, 473, 497, 501, 512, 533, 538, 554, 558, 575, 1896-1899, 1938, 1939, 1950, 1958, 1959, 1961, 1963, 1969, 1973, 1981, 1983, 1989, 1991, 1998, 2002, 2004, 2021, 2022, 2025, 2028, 2029, 2033-2035, 2039, 2042, 2043, 2046, 2054, 2056, 2061, 2063, 2073, 2078, 2079, 2089, 2090, 2101, 2103, 2106
bZIP family of G-box binding factors	128, 136, 141, 142, 184, 202, 222, 244, 329, 541, 545
Basic helix-loop-helix zipper	157, 179, 223, 271, 274, 305, 317, 548, 563
Myb	138, 167, 214, 221, 232, 248, 252, 254, 255, 270, 276, 278, 280, 281, 282, 283, 292, 293, 315, 319, 328, 463, 483, 485, 486, 491, 492, 494, 502, 504, 507, 508, 510, 515, 518, 519, 520, 521, 527, 534, 536, 537, 540, 553, 559, 566, 572, 588, 1905, 1906, 1931, 1932, 1934-1936, 1940, 1948, 1949, 1951, 1953-1955, 1957, 1960, 1962, 1964-1968, 1974, 1975, 1977-1979, 1982, 1984-1988, 1992, 1994-1997, 2001, 2003, 2013-2015, 2024, 2026, 2027, 2030, 2032, 2036-2038, 2041, 2044, 2045, 2047-2049, 2051, 2052, 2057-2060, 2065, 2067, 2071, 2072, 2074-2077, 2080-2088, 2104, 2105
Homeotic/homeodomain/homeobox/MADS	2, 3, 4, 7, 9, 10, 11, 12, 13, 17, 19, 25, 26, 27, 28, 29, 31, 32, 34, 35, 36, 37, 39, 40, 44, 45, 49, 50, 51, 52, 54, 55, 57, 60, 62, 63, 64, 65, 66, 69, 72, 74, 76, 77, 79, 82, 84, 88, 89, 92, 94, 96, 97, 98, 100, 102, 103, 104, 105, 106, 107, 108, 11, 112, 114, 116, 117, 123, 125, 127, 168, 185, 249, 250, 332, 333, 334, 336, 337, 338, 340, 341, 343, 344, 345, 346, 347, 348, 349, 350, 351, 353, 354, 355, 356, 357, 359, 360, 361, 362, 364, 365, 366, 367, 368, 370, 371, 372, 373, 374, 375, 376, 379, 380, 383, 384, 385, 386, 387, 389, 392, 393, 394, 398, 399, 400, 401, 402, 403, 406, 408, 409, 410, 412, 414, 416, 417,

Transcription factor family	Polynucleotide SEQ ID NO:
	418, 420, 422, 424, 425, 426, 475, 526, 529, 580, 591, 1901, 1902, 1937, 1941-1947, 1952, 1970-1972, 1976, 1980, 1990, 1993, 1999, 2000, 2006-2012, 2016-2020, 2023, 2031, 2040, 2050, 2053, 2055, 2062, 2064, 2066, 2068-2070, 2091-2100
Homeodomain zipper (HDZIP)	1, 5, 6, 14, 16, 20, 21, 22, 23, 30, 33, 41, 42, 47, 58, 59, 61, 68, 70, 71, 73, 75, 80, 86, 87, 90, 91, 93, 115, 119, 121, 126, 335, 339, 342, 352, 358, 363, 369, 377, 381, 388, 390, 396, 397, 415, 419, 421, 423, 2005, 2102
LIM domain	15, 18, 24, 43, 78, 81, 83, 198, 210, 225, 273, 378, 391, 433, 437, 450, 452
AP2 and EREBs	120, 124, 170, 171, 219, 220, 224, 226, 229, 230, 238, 242, 243, 245, 247, 256, 301, 320, 330, 432, 434, 435, 436, 445, 447, 451, 453, 454, 459, 466, 469, 476, 481, 490, 524, 546, 549, 570, 1895
Zinc finger domains of type Cys2His2	132, 146, 154, 180, 181, 182, 183, 191, 207, 227, 234, 288, 323, 324, 325, 326, 404, 535, 567, 584, 585, 586, 587, 589, 590
CCAAT box elements	155, 174, 266, 309, 431, 460, 484, 499, 542, 551, 574, 583
Other transcription factors	8, 38, 46, 48, 53, 56, 67, 85, 95, 99, 101, 109, 110, 113, 118, 122, 129, 130, 131, 134, 135, 137, 139, 140, 143, 1444, 145, 147, 149, 150, 151, 152, 153, 156, 158, 159, 160, 161, 162, 163, 164, 165, 166, 169, 172, 173, 175, 176, 177, 178, 186, 187, 188, 189, 190, 192, 193, 195, 196, 197, 199, 200, 201, 203, 204, 205, 208, 209, 211, 212, 213, 215, 216, 217, 218, 228, 231, 233, 235, 236, 237, 239, 240, 241, 251, 253, 257, 259, 260, 262, 263, 264, 267, 268, 269, 272, 275, 277, 287, 289, 291, 295, 296, 297, 298, 299, 300, 302, 304, 306, 307, 308, 310, 311, 312, 313, 314, 316, 321, 322, 327, 382, 395, 405, 407, 411, 413, 4127, 428, 429, 430, 438, 439, 440, 441, 442, 443, 444, 446, 449, 456, 457, 458, 461, 462, 464, 465, 467, 468, 471, 472, 474, 477, 478, 479, 480, 482, 487, 488, 489, 493, 495, 496, 498, 500, 505, 506, 509, 511, 513, 514, 516, 517, 522, 523, 525, 528, 530, 531,

Transcription factor family	Polynucleotide SEQ ID NO:
	532, 539, 543, 544, 547, 550, 552, 555, 556, 557, 560, 561, 562, 564, 565, 568, 569, 571, 573, 577, 578, 579, 581, 582, 448, 1183-1894, 1900, 1903, 1904, 1907, 1908-1912, 1933, 1956

The term "polynucleotide(s)," as used herein, means a single or double-stranded polymer of deoxyribonucleotide or ribonucleotide bases and includes DNA and corresponding RNA molecules, including HnRNA and mRNA molecules, both sense and anti-sense strands, and comprehends cDNA, genomic DNA and recombinant DNA, as well as wholly or partially synthesized polynucleotides. An HnRNA molecule contains introns and corresponds to a DNA molecule in a generally one-to-one manner. An mRNA molecule corresponds to an HnRNA and DNA molecule from which the introns have been excised. A polynucleotide may consist of an entire gene, or any portion thereof. Operable anti-sense polynucleotides may comprise a fragment of the corresponding polynucleotide, and the definition of "polynucleotide" therefore includes all such operable anti-sense fragments. Anti-sense polynucleotides and techniques involving anti-sense polynucleotides are well known in the art and are described, for example, in Robinson-Benion et al., "Antisense techniques," *Methods in Enzymol.* 254[23]: 363-375, 1995; and Kawasaki et al., *Artific. Organs* 20[8]:836-848, 1996.

The definition of the terms "complement", "reverse complement" and "reverse sequence", as used herein, is best illustrated by the following example. For the sequence 5' AGGACC 3', the complement, reverse complement and reverse sequence are as follows:

complement	3' TCCTGG 5'
reverse complement	3' GGTCTT 5'
reverse sequence	5' CCAGGA 3'.

The term "polypeptide", as used herein, encompasses amino acid chains of any length including full length proteins, wherein amino acid residues are linked by covalent peptide bonds. Polypeptides of the present invention may be naturally purified products, or may be produced partially or wholly using recombinant techniques. The term "polypeptide encoded by a polynucleotide" as used herein, includes polypeptides encoded

by a nucleotide sequence which includes the partial isolated DNA sequences of the present invention.

All of the polynucleotides and polypeptides described herein are isolated and purified, as those terms are commonly used in the art. Preferably, the polypeptides and
5 polynucleotides are at least about 80% pure, more preferably at least about 90% pure, and most preferably at least about 99% pure.

Some of the polynucleotides of the present invention are "partial" sequences, in that they do not represent a full length gene encoding a full length polypeptide. Such partial sequences may be extended by analyzing and sequencing various DNA libraries
10 using primers and/or probes and well known hybridization and/or PCR techniques. Partial sequences may be extended until an open reading frame encoding a polypeptide, a full length polynucleotide and/or gene capable of expressing a polypeptide, or another useful portion of the genome is identified. Such extended sequences, including full length polynucleotides and genes, are described as "corresponding to" a sequence
15 identified as one of the sequences of SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or a variant thereof, or a portion of one of the sequences of SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or a variant thereof, when the extended polynucleotide comprises an identified sequence or its variant, or an identified contiguous portion (*x*-mer) of one of the sequences of SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or a variant thereof. Such
20 extended polynucleotides may have a length of from about 50 to about 4,000 nucleic acids or base pairs, and preferably have a length of less than about 4,000 nucleic acids or base pairs, more preferably yet a length of less than about 3,000 nucleic acids or base pairs, more preferably yet a length of less than about 2,000 nucleic acids or base pairs. Under some circumstances, extended polynucleotides of the present invention may have a
25 length of less than about 1,800 nucleic acids or base pairs, preferably less than about 1,600 nucleic acids or base pairs, more preferably less than about 1,400 nucleic acids or base pairs, more preferably yet less than about 1,200 nucleic acids or base pairs, and most preferably less than about 1,000 nucleic acids or base pairs.

Similarly, RNA sequences, reverse sequences, complementary sequences,
30 antisense sequences, and the like, corresponding to the polynucleotides of the present invention, may be routinely ascertained and obtained using the cDNA sequences identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106.

The polynucleotides identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106 may contain open reading frames ("ORFs") or partial open reading frames encoding polypeptides. Open reading frames may be identified using techniques that are well known in the art. These techniques include, for example, analysis for the location of known start and stop codons, most likely reading frame identification based on codon frequencies, etc. Suitable tools and software for ORF analysis are available, for example, on the Internet at <http://www.ncbi.nlm.nih.gov/gorf/gorf.html>. Open reading frames and portions of open reading frames may be identified in the polynucleotides of the present invention. Once a partial open reading frame is identified, the polynucleotide may be extended in the area of the partial open reading frame using techniques that are well known in the art until the polynucleotide for the full open reading frame is identified. Thus, open reading frames encoding polypeptides may be identified using the polynucleotides of the present invention.

Once open reading frames are identified in the polynucleotides of the present invention, the open reading frames may be isolated and/or synthesized. Expressible genetic constructs comprising the open reading frames and suitable promoters, initiators, terminators, etc., which are well known in the art, may then be constructed. Such genetic constructs may be introduced into a host cell to express the polypeptide encoded by the open reading frame. Suitable host cells may include various prokaryotic and eukaryotic cells, including plant cells, mammalian cells, bacterial cells, algae and the like.

Polypeptides encoded by the polynucleotides of the present invention may be expressed and used in various assays to determine their biological activity. Such polypeptides may be used to raise antibodies, to isolate corresponding interacting proteins or other compounds, and to quantitatively determine levels of interacting proteins or other compounds.

As used herein, the term "variant" comprehends nucleotide or amino acid sequences different from the specifically identified sequences, wherein one or more nucleotides or amino acid residues is deleted, substituted, or added. Variants may be naturally occurring allelic variants, or non-naturally occurring variants. Variant sequences (polynucleotide or polypeptide) preferably exhibit at least 50%, more preferably at least 75%, and most preferably at least 90% identical residues to a sequence of the present invention. The percentage of identical residues is determined by aligning

the two sequences to be compared as described below, determining the number of identical residues in the aligned portion, dividing that number by the total number of residues in the inventive (queried) sequence, and multiplying the result by 100.

Polynucleotide and polypeptide sequences may be aligned, and percentage of identical residues in a specified region may be determined against another polynucleotide or polypeptide sequence, using computer algorithms that are publicly available. Two exemplary algorithms for aligning and identifying the similarity of polynucleotide sequences are the BLASTN and FASTA algorithms. Polynucleotides may also be analyzed using the BLASTX algorithm, which compares the six-frame conceptual translation products of a nucleotide query sequence (both strands) against a protein sequence database. The similarity of polypeptide sequences may be examined using the BLASTP algorithm. The BLASTN, BLASTX and BLASTP programs are available on the NCBI anonymous FTP server (<ftp://ncbi.nlm.nih.gov>) under /blast/executables/. The BLASTN algorithm Version 2.0.4 [Feb-24-1998] and Version 2.0.6 [Sept-16-1998], set to the default parameters described in the documentation and distributed with the algorithm, are preferred for use in the determination of polynucleotide variants according to the present invention. The BLASTP algorithm, is preferred for use in the determination of polypeptide variants according to the present invention. The use of the BLAST family of algorithms, including BLASTN, BLASTP, and BLASTX, is described at NCBI's Internet website at the URL <http://www.ncbi.nlm.nih.gov/BLAST/newblast.html> and in the publication of Altschul, Stephen F, et al., "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs," *Nucleic Acids Res.* 25:3389-3402, 1997.

The computer algorithm FASTA is available on the Internet at the ftp site <ftp://ftp.virginia.edu/pub/fasta/>. Version 2.0u4 [February 1996], set to the default parameters described in the documentation and distributed with the algorithm, may be used in the determination of variants according to the present invention. The use of the FASTA algorithm is described in Pearson WR and Lipman DJ, "Improved tools for biological sequence analysis," *Proc. Natl. Acad. Sci. USA* 85:2444-2448, 1988; and Pearson WR, "Rapid and sensitive sequence comparison with FASTP and FASTA," *Methods in Enzymol.* 183:63-98, 1990.

The following running parameters are preferred for determination of alignments and similarities using BLASTN that contribute to the E values and percentage identity for polynucleotide sequences: Unix running command: blastall -p blastn -d embldb -e 10 -G0 -E0 -r 1 -v 30 -b 30 -i queryseq -o results; the parameters are: -p Program Name [String]; -d Database [String]; -e Expectation value (E) [Real]; -G Cost to open a gap (zero invokes default behavior) [Integer]; -E Cost to extend a gap (zero invokes default behavior) [Integer]; -r Reward for a nucleotide match (blastn only) [Integer]; -v Number of one-line descriptions (V) [Integer]; -b Number of alignments to show (B) [Integer]; -i Query File [File In]; and -o BLAST report Output File [File Out] Optional.

The following running parameters are preferred for determination of alignments and similarities using BLASTP that contribute to the E values and percentage identity of polypeptide sequences: blastall -p blastp -d swissprot -e 10 -G0 -E0 -v 30 -b 30 -i queryseq -o results; wherein the parameters are: -p Program Name [String]; -d Database [String]; -e Expectation value (E) [Real]; -G Cost to open a gap (zero invokes default behavior) [Integer]; -E Cost to extend a gap (zero invokes default behavior) [Integer]; -v Number of one-line descriptions (v) [Integer]; -b Number of alignments to show (b) [Integer]; -I Query File [File In]; -o BLAST report Output File [File Out] Optional.

The "hits" to one or more database sequences by a queried sequence produced by BLASTN, FASTA, BLASTP or a similar algorithm, align and identify similar portions of sequences. The hits are arranged in order of the degree of similarity and the length of sequence overlap. Hits to a database sequence generally represent an overlap over only a fraction of the sequence length of the queried sequence.

The BLASTN, FASTA and BLASTP algorithms also produce "Expect" values for alignments. The Expect value (E) indicates the number of hits one can "expect" to see over a certain number of contiguous sequences by chance when searching a database of a certain size. The Expect value is used as a significance threshold for determining whether the hit to a database, such as the preferred EMBL database, indicates true similarity. For example, an E value of 0.1 assigned to a polynucleotide hit is interpreted as meaning that in a database of the size of the EMBL database, one might expect to see 0.1 matches over the aligned portion of the sequence with a similar score simply by chance. By this criterion, the aligned and matched portions of the polynucleotide sequences then have a probability of 90% of being the same. For sequences having an E value of 0.01 or less

over aligned and matched portions, the probability of finding a match by chance in the EMBL database is 1% or less using the BLASTN or FASTA algorithm.

According to one embodiment, "variant" polynucleotides and polypeptides, with reference to each of the polynucleotides and polypeptides of the present invention, preferably comprise sequences having the same number or fewer nucleic or amino acids than each of the polynucleotides or polypeptides of the present invention and producing an E value of 0.01 or less when compared to the polynucleotide or polypeptide of the present invention. That is, a variant polynucleotide or polypeptide is any sequence that has at least a 99% probability of being the same as the polynucleotide or polypeptide of the present invention, measured as having an E value of 0.01 or less using the BLASTN, FASTA, or BLASTP algorithms set at parameters described above.

Alternatively, variant polynucleotides of the present invention hybridize to the polynucleotide sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or complements, reverse sequences, or reverse complements of those sequences, under stringent conditions. As used herein, "stringent conditions" refers to prewashing in a solution of 6X SSC, 0.2% SDS; hybridizing at 65°C, 6X SSC, 0.2% SDS overnight; followed by two washes of 30 minutes each in 1X SSC, 0.1% SDS at 65°C and two washes of 30 minutes each in 0.2X SSC, 0.1% SDS at 65°C.

The present invention also encompasses polynucleotides that differ from the disclosed sequences but that, as a consequence of the degeneracy of the genetic code, encode a polypeptide which is the same as that encoded by a polynucleotide of the present invention. Thus, polynucleotides comprising sequences that differ from the polynucleotide sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; or complements, reverse sequences, or reverse complements thereof, as a result of conservative substitutions are contemplated by and encompassed within the present invention. Additionally, polynucleotides comprising sequences that differ from the polynucleotide sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or complements, reverse complements or reverse sequences thereof, as a result of deletions and/or insertions totaling less than 10% of the total sequence length are also contemplated by and encompassed within the present invention. Similarly, polypeptides comprising sequences that differ from the polypeptide sequences recited in SEQ ID NOS: 592-1182, 1913-1930 and 2107-2278, as a result of amino acid substitutions, insertions, and/or

deletions totaling less than 10% of the total sequence length are contemplated by and encompassed within the present invention. In certain embodiments, variants of the inventive polypeptides possess biological activities that are the same or similar to those of the inventive polypeptides. Such variant polypeptides function as transcription factors and are thus capable of modifying gene expression in a plant. Similarly, variant polynucleotides may encode polypeptides that function as transcription factors.

Polynucleotides of the present invention also comprehend polynucleotides comprising at least a specified number of contiguous residues (x-mers) of any of the polynucleotides identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, complements, reverse sequences, and reverse complements of such sequences, and their variants. Similarly, polypeptides of the present invention comprehend polypeptides comprising at least a specified number of contiguous residues (x-mers) of any of the polypeptides identified as SEQ ID NOS: 592-1182, 1913-1930 and 2107-2278, and their variants. As used herein, the term "x-mer," with reference to a specific value of "x," refers to a sequence comprising at least a specified number ("x") of contiguous residues of any of the polynucleotides identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or the polypeptides identified as SEQ ID NOS: 592-1182, 1913-1930 and 2107-2278. According to preferred embodiments, the value of x is preferably at least 20, more preferably at least 40, more preferably yet at least 60, and most preferably at least 80. Thus, polynucleotides and polypeptides of the present invention comprise a 20-mer, a 40-mer, a 60-mer, an 80-mer, a 100-mer, a 120-mer, a 150-mer, a 180-mer, a 220-mer, a 250-mer, a 300-mer, a 400-mer, a 500-mer or a 600-mer of a polynucleotide or polypeptide identified as SEQ ID NOS: 1-2368, and variants thereof.

The inventive polynucleotides may be isolated by high throughput sequencing of cDNA libraries prepared from *Eucalyptus grandis* and *Pinus radiata* as described below in Examples 1 and 2. Alternatively, oligonucleotides based on the sequences provided in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106 may be prepared as detailed below and used to identify positive clones in either cDNA or genomic DNA libraries from *Eucalyptus grandis* and *Pinus radiata* by means of hybridization or PCR techniques. Hybridization and PCR techniques suitable for use with such oligonucleotides are well known in the art, and include those taught by Sambrook et al., *Ibid*. Positive clones may be analyzed by restriction enzyme digestion, DNA sequencing or the like.

The polynucleotides of the present invention may alternatively be synthesized using techniques that are well known in the art. The polynucleotides may be synthesized, for example, using automated oligonucleotide synthesizers (e.g., Beckman Oligo 1000M DNA Synthesizer) to obtain polynucleotide segments of up to 50 or more nucleic acids.

A plurality of such polynucleotide segments may then be ligated using standard DNA manipulation techniques that are well known in the art of molecular biology. One conventional and exemplary polynucleotide synthesis technique involves synthesis of a single stranded polynucleotide segment having, for example, 80 nucleic acids, and hybridizing that segment to a synthesized complementary 85 nucleic acid segment to produce a 5 nucleotide overhang. The next segment may then be synthesized in a similar fashion, with a 5 nucleotide overhang on the opposite strand. The "sticky" ends ensure proper ligation when the two portions are hybridized. In this way, a complete polynucleotide of the present invention may be synthesized entirely *in vitro*.

In one embodiment, the DNA constructs of the present invention include an open reading frame coding for at least a functional portion of a polypeptide of the present invention or a variant thereof. As used herein, the "functional portion" of a polypeptide is that portion which contains the active site essential for regulating gene expression, *i.e.*, the portion of the molecule that is capable of binding to, or interacting with, the promoter of the gene to be expressed. The DNA-binding domain(s) for certain of the inventive polypeptides are identified below in Table 2. These DNA binding domains were identified using PROSITE 15.0 pattern or profile sequences as listed in the PROSITE database. PROSITE is available at <http://www.expasy.ch/sprot/prosite.html> and its use is described in Hofman et al., *Nucleic Acids Res.* 27:215-219, 1999; and in Bairoch, *Nucleic Acids Res.* 20:Suppl.2013-2018, 1992.

TABLE 2

Polynucleotide SEQ ID NO:	DNA-binding Domain(s) SEQ ID NO:
1931	2283
1934	2284, 2285
1940	2288
1949	2293
1951	2279, 2280
1953	2296, 2297
1957	2298

Polynucleotide SEQ ID NO:	DNA-binding Domain(s) SEQ ID NO:
1960	2301, 2302
1962	2307
1965	2308, 2309
1967	2281, 2282
1978	2320
1979	2321
1982	2322, 2323
1986	2324
1992	2335
1994	2336, 2337
1995	2338, 2339
1997	2340
2003	2286, 2287
2013	2289, 2290
2020	2291, 2292
2027	2299, 2300
2030	2303, 2304
2032	2305, 2306
2036	2310, 2311
2038	2312, 2313
2049	2314, 2315
2051	2316, 2317
2052	2318, 2319
2057	2325, 2326
2059	2327, 2328
2060	2329, 2330
2065	2331, 2332
2067	2333, 2334
2074	2342, 2343
2075	2344, 2345
2076	2346, 2347
2077	2348, 2349
2080	2352
2081	2353
2082	2354
2083	2355, 2356
2084	2357, 2358
2085	2359, 2360
2086	2361, 2362
2087	2365, 2366
2088	2367, 2368
2104	2350, 2351
2105	2363, 2364

The functional portion of a polypeptide may also be determined by targeted mutagenesis and screening of modified protein products with protocols well known in the art (Solano et al., *J. Biol. Chem.* 272:2889-95, 1997). The active site will generally exhibit high substrate specificity. Portions of the inventive polypeptides may be generated by synthetic or recombinant means. Synthetic polypeptides having fewer than about 100 amino acids, and generally fewer than about 50 amino acids, may be generated using techniques well known to those of ordinary skill in the art. For example, such polypeptides may be synthesized using any of the commercially available solid-phase techniques, such as the Merrifield solid-phase synthesis method, where amino acids are sequentially added to a growing amino acid chain. See Merrifield, *J. Am. Chem. Soc.* 85:2149-2154, 1963. Equipment for automated synthesis of polypeptides is commercially available from suppliers such as Perkin Elmer/Applied BioSystems, Inc. (Foster City, CA), and may be operated according to the manufacturer's instructions.

An open reading frame may be inserted in the DNA construct in a sense or antisense orientation, such that transformation of a target plant with the DNA construct will lead to a change in the amount of polypeptide compared to the wild-type plant. Transformation with a DNA construct comprising an open reading frame in a sense orientation will generally result in over-expression of the selected gene, while transformation with a DNA construct comprising an open reading frame in an antisense orientation will generally result in reduced expression of the selected gene. A population of plants transformed with a DNA construct comprising an open reading frame of the present invention in either a sense or antisense orientation may be screened for increased or reduced expression of the gene in question using techniques well known to those of skill in the art, and plants having the desired phenotypes may thus be isolated.

Alternatively, expression of a gene encoding a plant transcription factor may be inhibited by inserting a portion of an open reading frame of the present invention, in either sense or antisense orientation, in the DNA construct. Such portions need not be full-length but preferably comprise at least 25 and more preferably at least 50 residues of an inventive DNA sequence. A much longer portion or even the full length DNA corresponding to the complete open reading frame may be employed. The portion of the open reading frame does not need to be precisely the same as the endogenous sequence, provided that there is sufficient sequence similarity to achieve inhibition of the target

gene. Thus a sequence derived from one species may be used to inhibit expression of a gene in a different species.

In another embodiment, the inventive DNA constructs comprise a DNA sequence including an untranslated, or non-coding, region of a gene coding for a polypeptide of the present invention, or a DNA sequence complementary to such an untranslated region. Examples of untranslated regions which may be usefully employed in such constructs include introns and 5'-untranslated leader sequences. Transformation of a target plant with such a DNA construct may lead to a reduction in the amount of the polypeptide expressed in the plant by the process of cosuppression, in a manner similar to that discussed, for example, by Napoli et al. (*Plant Cell* 2:279-290, 1990), and de Carvalho Niebel et al. (*Plant Cell* 7:347-358, 1995).

Alternatively, regulation of polypeptide expression can be achieved by inserting appropriate sequences or subsequences (e.g. DNA or RNA) in ribozyme constructs (McIntyre and Manners, *Transgenic Res.* 5[4]:257-262, 1996). Ribozymes are synthetic RNA molecules that comprise a hybridizing region complementary to two regions, each of which comprises at least 5 contiguous nucleotides in a mRNA molecule encoded by one of the inventive polynucleotides. Ribozymes possess highly specific endonuclease activity, which autocatalytically cleaves the mRNA.

The DNA constructs of the present invention further comprise a gene promoter sequence and a gene termination sequence, operably linked to the DNA sequence to be transcribed, which control expression of the gene. The gene promoter sequence is generally positioned at the 5' end of the DNA sequence to be transcribed, and is employed to initiate transcription of the DNA sequence. Gene promoter sequences are generally found in the 5' untranslated region of a gene but they may exist downstream of the open reading frame, in introns (Luehrsén, *Mol. Gen. Genet.* 225:81-93, 1991) or in the coding region, as for example in a plant defence gene (Douglas et al., *EMBO J.* 10:1767-1775, 1991). When the construct includes an open reading frame in a sense orientation, the gene promoter sequence also initiates translation of the open reading frame. For DNA constructs comprising either an open reading frame in an antisense orientation or an untranslated region, the gene promoter sequence may consist only of a transcription initiation site having a RNA polymerase binding site.

A variety of gene promoter sequences which may be usefully employed in the DNA constructs of the present invention are well known in the art. The gene promoter sequence, and also the gene termination sequence, may be endogenous to the target plant host or may be exogenous, provided the promoter is functional in the target host. For example, the promoter and termination sequences may be from other plant species, plant viruses, bacterial plasmids and the like. Preferably, gene promoter and termination sequences are from the inventive sequences themselves.

Factors influencing the choice of promoter include the desired tissue specificity of the construct, and the timing of transcription and translation. For example, constitutive promoters, such as the 35S Cauliflower Mosaic Virus (CaMV 35S) promoter, will affect the activity of the enzyme in all parts of the plant. Use of a tissue specific promoter will result in production of the desired sense or antisense RNA only in the tissue of interest. With DNA constructs employing inducible gene promoter sequences, the rate of RNA polymerase binding and initiation can be modulated by external stimuli, such as light, heat, anaerobic stress, alteration in nutrient conditions and the like. Temporally regulated promoters can be employed to effect modulation of the rate of RNA polymerase binding and initiation at a specific time during development of a transformed cell. Preferably, the original promoters from the enzyme gene in question, or promoters from a specific tissue-targeted gene in the organism to be transformed, such as eucalyptus or pine are used. Other examples of gene promoters which may be usefully employed in the present invention include mannopine synthase (mas), octopine synthase (ocs) and those reviewed by Chua et al. (*Science* 244:174-181, 1989).

The gene termination sequence, which is located 3' to the DNA sequence to be transcribed, may come from the same gene as the gene promoter sequence or may be from a different gene. Many gene termination sequences known in the art may be usefully employed in the present invention, such as the 3' end of the *Agrobacterium tumefaciens* nopaline synthase gene. However, preferred gene terminator sequences are those from the original gene or from the target species to be transformed.

The DNA constructs of the present invention may also contain a selection marker that is effective in cells of the target organism, such as a plant, to allow for the detection of transformed cells containing the inventive construct. Such markers, which are well known in the art, typically confer resistance to one or more toxins. One example of such

a marker is the NPTII gene whose expression results in resistance to kanamycin or hygromycin, antibiotics which are usually toxic to plant cells at a moderate concentration (Rogers et al., in Weissbach, A and Weissbach H, eds., *Methods for Plant Molecular Biology*, Academic Press Inc.: San Diego, CA, 1988). Transformed cells can thus be identified by their ability to grow in media containing the antibiotic in question. Alternatively, the presence of the desired construct in transformed cells can be determined by means of other techniques well known in the art, such as Southern and Western blots.

A transcription initiation site is additionally included in the DNA construct when the sequence to be transcribed lacks such a site.

Techniques for operatively linking the components of the inventive DNA constructs are well known in the art and include the use of synthetic linkers containing one or more restriction endonuclease sites as described, for example, by Sambrook et al., (*Molecular cloning: a laboratory manual*, CSHL Press: Cold Spring Harbor, NY, 1989). The DNA construct of the present invention may be linked to a vector having at least one replication system, for example *E. coli*, whereby after each manipulation, the resulting construct can be cloned and sequenced and the correctness of the manipulation determined.

The DNA constructs of the present invention may be used to transform a variety of target organisms including, but not limited to, plants. Plants which may be transformed using the inventive constructs include both monocotyledonous angiosperms (e.g., grasses, corn, grains, oat, wheat and barley); and dicotyledonous angiosperms (e.g., *Arabidopsis*, tobacco, legumes, alfalfa, oaks, eucalyptus, maple); and Gymnosperms (e.g., Scots pine (Aronen, *Finnish Forest Res. Papers*, Vol. 595, 1996); white spruce (Ellis et al., *Biotechnology* 11:84-89, 1993); and larch (Huang et al., *In Vitro Cell* 27:201-207, 1991). In a preferred embodiment, the inventive DNA constructs are employed to transform woody plants, herein defined as a tree or shrub whose stem lives for a number of years and increases in diameter each year by the addition of woody tissue. Preferably the target plant is selected from the group consisting of eucalyptus and pine species, most preferably from the group consisting of *Eucalyptus grandis* and *Pinus radiata*. Other species which may be usefully transformed with the DNA constructs of the present invention include, but are not limited to: pines such as *Pinus banksiana*, *Pinus brutia*,

Pinus caribaea, *Pinus clausa*, *Pinus contorta*, *Pinus coulteri*, *Pinus echinata*, *Pinus*
eldarica, *Pinus ellioti*, *Pinus jeffreyi*, *Pinus lambertiana*, *Pinus monticola*, *Pinus nigra*,
Pinus palustris, *Pinus pinaster*, *Pinus ponderosa*, *Pinus resinosa*, *Pinus rigida*, *Pinus*
serotina, *Pinus strobus*, *Pinus sylvestris*, *Pinus taeda*, *Pinus virginiana*; other
5 gymnosperms, such as *Abies amabilis*, *Abies balsamea*, *Abies concolor*, *Abies grandis*,
Abies lasiocarpa, *Abies magnifica*, *Abies procera*, *Chamaecyparis lawsoniana*,
Chamaecyparis nootkatensis, *Chamaecyparis thyoides*, *Huniperus virginiana*, *Larix*
decidua, *Larix laricina*, *Larix leptolepis*, *Larix occidentalis*, *Larix siberica*, *Libocedrus*
decurrens, *Picea abies*, *Picea engelmanni*, *Picea glauca*, *Picea mariana*, *Picea pungens*,
10 *Picea rubens*, *Picea sitchensis*, *Pseudotsuga menziesii*, *Sequoia gigantea*, *Sequoia*
sempervirens, *Taxodium distichum*, *Tsuga canadensis*, *Tsuga heterophylla*, *Tsuga*
mertensiana, *Thuja occidentalis*, *Thuja plicata*; and Eucalypts, such as *Eucalyptus alba*,
Eucalyptus bancroftii, *Eucalyptus botryoides*, *Eucalyptus bridgesiana*, *Eucalyptus*
calophylla, *Eucalyptus camaldulensis*, *Eucalyptus citriodora*, *Eucalyptus cladocalyx*,
15 *Eucalyptus coccifera*, *Eucalyptus curtisii*, *Eucalyptus dalrympleana*, *Eucalyptus*
deglupta, *Eucalyptus delagatensis*, *Eucalyptus diversicolor*, *Eucalyptus dunnii*,
Eucalyptus ficifolia, *Eucalyptus globulus*, *Eucalyptus gomphocephala*, *Eucalyptus gunnii*,
Eucalyptus henryi, *Eucalyptus laevopinea*, *Eucalyptus macarthurii*, *Eucalyptus*
macrorhyncha, *Eucalyptus maculata*, *Eucalyptus marginata*, *Eucalyptus megacarpa*,
20 *Eucalyptus melliodora*, *Eucalyptus nicholii*, *Eucalyptus nitens*, *Eucalyptus nova-anglica*,
Eucalyptus obliqua, *Eucalyptus obtusiflora*, *Eucalyptus oreades*, *Eucalyptus pauciflora*,
Eucalyptus polybractea, *Eucalyptus regnans*, *Eucalyptus resinifera*, *Eucalyptus robusta*,
Eucalyptus rudis, *Eucalyptus saligna*, *Eucalyptus sideroxylon*, *Eucalyptus stuartiana*,
Eucalyptus tereticornis, *Eucalyptus torelliana*, *Eucalyptus urnigera*, *Eucalyptus*
25 *urophylla*, *Eucalyptus viminalis*, *Eucalyptus viridis*, *Eucalyptus wandoo* and *Eucalyptus*
youmanni; and hybrids of any of these species.

Techniques for stably incorporating DNA constructs into the genome of target
 plants are well known in the art and include *Agrobacterium tumefaciens* mediated
 introduction, electroporation, protoplast fusion, injection into reproductive organs,
 30 injection into immature embryos, high velocity projectile introduction and the like. The
 choice of technique will depend upon the target plant to be transformed. For example,
 dicotyledonous plants and certain monocots and gymnosperms may be transformed by

Agrobacterium Ti plasmid technology, as described, for example by Bevan (*Nucleic Acids Res.* 12:8711-8721, 1984). Targets for the introduction of the DNA constructs of the present invention include tissues, such as leaf tissue, dissociated cells, protoplasts, seeds, embryos, meristematic regions; cotyledons, hypocotyls, and the like. The preferred method for transforming eucalyptus and pine is a biolistic method using pollen (see, for example, Aronen, in *Finnish Forest Res. Papers* 595:53, 1996) or easily regenerable embryonic tissues.

Once the cells are transformed, cells having the inventive DNA construct incorporated in their genome may be selected by means of a marker, such as the kanamycin resistance marker discussed above. Transgenic cells may then be cultured in an appropriate medium to regenerate whole plants, using techniques well known in the art. In the case of protoplasts, the cell wall is allowed to reform under appropriate osmotic conditions. In the case of seeds or embryos, an appropriate germination or callus initiation medium is employed. For explants, an appropriate regeneration medium is used. Regeneration of plants is well established for many species. For a review of regeneration of forest trees see Dunstan et al., "Somatic embryogenesis in woody plants," in Thorpe TA, ed., *In vitro embryogenesis of plants* (Current Plant Science and Biotechnology in Agriculture, 20[12]:471-540, 1995). Specific protocols for the regeneration of spruce are discussed by Roberts et al. ("Somatic embryogenesis of spruce," in Redenbaugh K, ed., *Synseed: applications of synthetic seed to crop improvement*, CRC Press: 23:427-449, 1993). Transformed plants having the desired phenotype may be selected using techniques well known in the art. The resulting transformed plants may be reproduced sexually or asexually, using methods well known in the art, to give successive generations of transgenic plants.

As discussed above, the production of RNA in target cells can be controlled by choice of the promoter sequence, or by selecting the number of functional copies or the site of integration of the DNA sequences incorporated into the genome of the target host. A target organism may be transformed with more than one DNA construct of the present invention, thereby modulating the activity of more than one transcription factor, for example affecting gene expression in more than one tissue, or at more than one time in the development of the target organism. Similarly, a DNA construct may be assembled containing more than one open reading frame coding for a polypeptide of the present

invention or more than one untranslated region of a gene coding for such a polypeptide. The polynucleotides of the present invention may also be employed in combination with other known sequences encoding transcription factors.

The isolated polynucleotides of the present invention also have utility in genome mapping, in physical mapping, and in positional cloning of genes. As detailed below, the polynucleotide sequences identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, and their variants, may be used to design oligonucleotide probes and primers. Oligonucleotide probes designed using the polynucleotides of the present invention may be used to detect the presence and examine the expression patterns of genes in any organism having sufficiently similar DNA and RNA sequences in their cells using techniques that are well known in the art, such as slot blot DNA hybridization techniques. Oligonucleotide primers designed using the polynucleotides of the present invention may be used for PCR amplifications. Oligonucleotide probes and primers designed using the polynucleotides of the present invention may also be used in connection with various microarray technologies, including the microarray technology of Synteni (Palo Alto, California).

As used herein, the term "oligonucleotide" refers to a relatively short segment of a polynucleotide sequence, generally comprising between 6 and 60 nucleotides, and comprehends both probes for use in hybridization assays and primers for use in the amplification of DNA by polymerase chain reaction.

An oligonucleotide probe or primer is described as "corresponding to" a polynucleotide of the present invention, including one of the sequences set out as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or a variant thereof, if the oligonucleotide probe or primer, or its complement, is contained within one of the sequences set out as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or a variant of one of the specified sequences. Oligonucleotide probes and primers of the present invention are substantially complementary to a polynucleotide disclosed herein.

Two single stranded sequences are said to be substantially complementary when the nucleotides of one strand, optimally aligned and compared, with the appropriate nucleotide insertions and/or deletions, pair with at least 80%, preferably at least 90% to 95% and more preferably at least 98% to 100% of the nucleotides of the other strand. Alternatively, substantial complementarity exists when a first DNA strand will selectively

hybridize to a second DNA strand under stringent hybridization conditions. Stringent hybridization conditions for determining complementarity include salt conditions of less than about 1 M, more usually less than about 500 mM, and preferably less than about 200 mM. Hybridization temperatures can be as low as 5°C, but are generally greater than about 22°C, more preferably greater than about 30°C, and most preferably greater than about 37°C. Longer DNA fragments may require higher hybridization temperatures for specific hybridization. Since the stringency of hybridization may be affected by other factors such as probe composition, presence of organic solvents and extent of base mismatching, the combination of parameters is more important than the absolute measure of any one alone.

In specific embodiments, the oligonucleotide probes and/or primers comprise at least about 6 contiguous residues, more preferably at least about 10 contiguous residues, and most preferably at least about 20 contiguous residues complementary to a polynucleotide sequence of the present invention. Probes and primers of the present invention may be from about 8 to 100 base pairs in length or, preferably from about 10 to 50 base pairs in length or, more preferably from about 15 to 40 base pairs in length. The probes can be easily selected using procedures well known in the art, taking into account DNA-DNA hybridization stringencies, annealing and melting temperatures, and potential for formation of loops and other factors, which are well known in the art. Tools and software suitable for designing probes, and especially suitable for designing PCR primers, are available on the Internet, for example, at URL <http://www.horizonpress.com/pcr/>. Preferred techniques for designing PCR primers are also disclosed in Dieffenbach and Dykster, *PCR primer: a laboratory manual*, CSHL Press: Cold Spring Harbor, NY, 1995.

A plurality of oligonucleotide probes or primers corresponding to a polynucleotide of the present invention may be provided in a kit form. Such kits generally comprise multiple DNA or oligonucleotide probes, each probe being specific for a polynucleotide sequence. Kits of the present invention may comprise one or more probes or primers corresponding to a polynucleotide of the present invention, including a polynucleotide sequence identified in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106.

In one embodiment useful for high-throughput assays, the oligonucleotide probe kits of the present invention comprise multiple probes in an array format, wherein each probe is immobilized at a predefined, spatially addressable location on the surface of a

solid substrate. Array formats which may be usefully employed in the present invention are disclosed, for example, in U.S. Patents Nos. 5,412,087 and 5,545,451; and PCT Publication No. WO 95/00450, the disclosures of which are hereby incorporated by reference.

5 The polynucleotides of the present invention may also be used to tag or identify an organism or reproductive material therefrom. Such tagging may be accomplished, for example, by stably introducing a non-disruptive non-functional heterologous polynucleotide identifier into an organism, the polynucleotide comprising one of the polynucleotides of the present invention.

10 The following examples are offered by way of illustration and not by way of limitation.

EXAMPLE 1

Isolation and Characterization of cDNA Clones from *Eucalyptus grandis*

15

Nine *Eucalyptus grandis* cDNA expression libraries (prepared from either mature shoot buds, early wood phloem, floral tissue, leaf tissue (two independent libraries), feeder roots, structural roots, xylem or early wood xylem) were constructed and screened as follows.

20

Total RNA was extracted from the plant tissue using the protocol of Chang et al. (*Plant Molecular Biology Reporter* 11:113-116, 1993). mRNA was isolated from the total RNA preparation using either a Poly(A) Quik mRNA Isolation Kit (Stratagene, La Jolla, CA) or Dynal Beads Oligo (dT)₂₅ (Dynal, Skogen, Norway). A cDNA expression library was constructed from the purified mRNA by reverse transcriptase synthesis followed by insertion of the resulting cDNA clones in Lambda ZAP using a ZAP Express cDNA Synthesis Kit (Stratagene), according to the manufacturer's protocol. The resulting cDNAs were packaged using a Gigapack II Packaging Extract (Stratagene) using an aliquot (1 – 5 µl) from the 5 µl ligation reaction dependent upon the library. Mass excision of the library was done using XL1-Blue MRF' cells and XL0LR cells (Stratagene) with ExAssist helper phage (Stratagene). The excised phagemids were diluted with NZY broth (Gibco BRL, Gaithersburg, MD) and plated out onto LB-kanamycin agar plates containing X-gal and isopropylthio-beta-galactoside (IPTG).

30

Of the colonies plated and picked for DNA miniprep, 99% contained an insert suitable for sequencing. Positive colonies were cultured in NZY broth with kanamycin and cDNA was purified by means of alkaline lysis and polyethylene glycol (PEG) precipitation. Agarose gel at 1% was used to screen sequencing templates for chromosomal contamination. Dye primer sequences were prepared using a Turbo Catalyst 800 machine (Perkin Elmer/Applied Biosystems Division, Foster City, CA) according to the manufacturer's protocol.

DNA sequence for positive clones was obtained using a Perkin Elmer/Applied Biosystems Division Prism 377 sequencer. cDNA clones were sequenced first from the 5' end and, in some cases, also from the 3' end. For some clones, internal sequence was obtained using either Exonuclease III deletion analysis, yielding a library of differentially sized subclones in pBK-CMV, or by direct sequencing using gene-specific primers designed to identified regions of the gene of interest.

The determined cDNA sequences were compared to known sequences in the EMBL database (up to mid-July 1999) using the computer algorithms FASTA and/or BLASTN. Multiple alignments of redundant sequences were used to build up reliable consensus sequences. The determined cDNA sequences are provided in SEQ ID NOS: 1-331, 1183-1536, 1896-1901, 1905, 1906, 1908-1910, 1932-1968, 2001-2036, 2074-2079 and 2104. Based on similarity to known sequences from other plant species, the isolated DNA sequences were identified as encoding transcription factors, as detailed in Table 1 above. The predicted amino acid sequences corresponding to the DNA sequences of SEQ ID NOS: 1-331, 1896-1901, 1905, 1906, 1908, 1909, 1910, 1932-1968, 2001-2036, 2074-2079 and 2104 are provided in SEQ ID NOS: 592-922, 1914-1919, 1923, 1924, 1926-1928, 2108-2142, 2175-2210, 2247-2252 and 2276, respectively.

25

EXAMPLE 2

Isolation and Characterization of cDNA Clones from *Pinus radiata*

Fourteen *Pinus radiata* cDNA expression libraries (prepared from either shoot bud tissue, suspension cultured cells, early wood phloem (two independent libraries), fascicle meristem tissue, male strobilus, root (unknown lineage), feeder roots, structural

roots, female strobilus, cone primordia, female receptive cones and xylem (two independent libraries)) were constructed and screened as described above in Example 1.

DNA sequence for positive clones was obtained using forward and reverse primers on a Perkin Elmer/Applied Biosystems Division Prism 377 sequencer and the determined sequences were compared to known sequences in the database as described above.

Based on similarity to known sequences from other plant species, the isolated DNA sequences (SEQ ID NOS: 332-591, 1537-1894, 1895, 1902-1904, 1907, 1911, 1912, 1931, 1969-2000, 2037-2073, 2080-2103, 2105 and 2106) were identified as encoding transcription factors as detailed above in Table 1. The predicted amino acid sequences corresponding to the DNA sequences of SEQ ID NOS: 332-591, 1895, 1902-1904, 1907, 1911, 1912, 1931, 1969-2000, 2037-2073, 2080-2103, 2105 and 2106 are provided in SEQ ID NOS: 923-1182, 1913, 1920-1922, 1925, 1929-1930, 2107, 2143-2174, 2211-2246, 2253-2275, 2277 and 2278, respectively.

EXAMPLE 3

Use of a Myb Transcription Factor Gene to Modify Gene Expression in Plants

Transformation of tobacco plants with a *Eucalyptus grandis* Myb transcription factor gene is performed as follows. DNA constructs comprising sense and anti-sense constructs containing a DNA sequence including the coding region of the Myb transcription factor of SEQ ID NO: 2076 are constructed and inserted into *Agrobacterium tumefaciens* by direct transformation using published methods (see An G, Ebert PR, Mitra A, Ha SB, "Binary vectors," in Gelvin SB and Schilperoort RA, eds., *Plant Molecular Biology Manual*, Kluwer Academic Publishers: Dordrecht, 1988). The constructs of sense DNAs are made by direct cloning from PBK-CMV plasmid by cloning cDNA insert into pART7 plasmid, which is then cut by NotI enzyme and 35S-Insert-OCS 3'UTR put into pART27 plant expression vector (see Gleave, *Plant Molecular Biology* 20:1203-1207, 1992). The presence and integrity of the transgenic constructs are verified by restriction digestion and DNA sequencing.

Tobacco (*Nicotiana tabacum* cv. Samsun) leaf sections are transformed with the sense and anti-sense constructs using the method of Horsch et al. (*Science* 227:1229-

1231, 1985). *Arabidopsis thaliana* (ecotype: Columbia) whole plants are transformed with the sense and anti-sense constructs using either the vacuum infiltration (Bechtold et al., *C.R. Acad.* 316:1194-1199, 1992), or floral dip (Clough and Bent, *The Plant Journal* 16:735-743, 1998) procedures. Transformed plants containing the appropriate construct
5 are verified using Southern blot experiments. Expression of the *Eucalyptus* Myb transcription factor gene in transformed plants is confirmed by isolating total RNA from each independent transformed plant line created with the Myb transcription factor gene sense and anti-sense constructs. The RNA samples are analysed in Northern blot experiments to determine the level of expression of the transgene in each transformed
10 line. The expression level of the Myb transcription factor, encoded by the *Eucalyptus* Myb transcription factor gene and by the endogenous Myb transcription factor gene, for each transformed plant line created with the sense and anti-sense constructs is compared to that of wild-type control plants.

15 Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, changes and modifications can be carried out without departing from the scope of the invention which is intended to be limited only by the scope of the claims.

Claims:

1. An isolated polynucleotide comprising a sequence selected from the group consisting of sequences provided in SEQ ID NO: 1-591, 1183-1912 and 1931-2106.
2. An isolated polynucleotide comprising a sequence selected from the group consisting of:
 - (a) complements of the sequence recited in SEQ ID NO: 1-591, 1183-1912 and 1931-2106;
 - (b) reverse complements of the sequence recited in SEQ ID NO: 1-591, 1183-1912 and 1931-2106; and
 - (c) reverse sequences of the sequences recited in SEQ ID NO: 1-591, 1183-1912 and 1931-2106.
3. An isolated polynucleotide comprising a sequence having at least 40% identical nucleotides to a sequence provided in SEQ ID NO: 1-8, 10, 11, 14-16, 21-23, 25, 26, 28, 29, 32-38, 41-67, 69-92, 95, 97-100, 102-105, 107-118, 120, 122, 124-130, 133-136, 138, 139, 141-148, 150-154, 156-164, 166, 167, 169-174, 176-217, 219-225, 227-232, 234-239, 241-245, 247-251, 253-267, 269-279, 281, 284-338, 341, 343-346, 348-351, 353, 356-359, 362, 365-367, 370-372, 375-378, 381-385, 387-393, 395-397, 399-404, 406, 407, 409-413, 415, 417-419, 421-436, 438-441, 443-452, 454, 455, 457-459, 461-468, 470-478, 480-487, 489-498, 500, 501, 503, 504, 506-516, 519-524, 527-538, 540-542, 544-579, 581-591, 1895-1902, 1904-1912, 1931-1934, 1938-1941, 1943-1956, 1958-1960, 1962-1964, 1966, 1967, 1969, 1972-1978, 1980, 1981, 1983-1998, 2000-2006, 2008-2010, 2013-2015, 2018, 2020-2038, 2041-2056, 2058-2063, 2065-2069, 2072-2086, 2088-2091, 2096-2098, 2100 and 2102-2105 as determined using the computer algorithm BLASTN.
4. An isolated polynucleotide comprising a sequence having at least 60% identical nucleotides to a sequence provided in SEQ ID NO: 1-16, 18-26, 28-38, 41-92, 95-118, 120, 122-164, 166, 167, 169-174, 176-217, 219-232, 234-281, 283-338, 341, 343-346, 348-353, 356-359, 362, 365-367, 369-372, 375-379, 381-385, 387-397, 399-407, 409-413, 415, 417-419, 421-436, 438-455, 457-468, 470-478, 480-501, 503, 504, 506-525, 527-538, 540-542, 544-579, 581-591, 1895-1902, 1904-1912, 1931-1941, 1943-1969, 1972-1981, 1983-1998, 2000-2010, 2013-2018, 2020-

- 2039, 2041-2056, 2058-2063, 2065-2069, 2072-2091, 2096-2098, 2100 and 2102-2015 as determined using the computer algorithm BLASTN.
5. An isolated polynucleotide comprising a sequence having at least 75% identical nucleotides to a sequence provided in SEQ ID NO: 1-16, 18-38, 41-164, 166-167, 169-339, 341, 343-346, 348-353, 356-359, 362-363, 365-372, 375-385, 387-407, 409-415, 417-419, 421-455, 457-468, 470-501, 503-504, 506-525, 527-538, 540-579, 581-591, 1895-1902, 1904-1912, 1931-1970, 1972-2010, 2013-2018, 2020-2063, 2065-2069, 2071-2091, 2095-2098 and 2100-2105 as determined using the computer algorithm BLASTN.
 6. An isolated polynucleotide comprising a sequence having at least 90% identical nucleotides to a sequence provided in SEQ ID NO: 1-38, 41-164, 166-167, 169-346, 348-353, 355-359, 362-372, 374-407, 409-415, 417-455, 457-468, 470-501, 503-525, 527-538, 540-579, 581-591, 1895-1902, 1904-1912, 1931-2010, 2013-2018, 2020-2063, 2065-2069, 2071-2091, 2093 and 2095-2106 as determined using the computer algorithm BLASTN.
 7. An isolated polypeptide encoded by a polynucleotide according to any one of claims 1-6.
 8. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 592, 594-850, 852-930, 932-951, 953-1046, 1048-1182, 1913-1930, 2107-2293 and 2296-2368.
 9. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:
 - (a) sequences having at least 60% identical residues to a sequence of SEQ ID NO: 592, 597, 599, 602, 605, 607, 610, 612, 613, 616, 624, 626-628, 630-635, 637, 639-641, 644, 646, 648, 649, 652, 653, 655, 656, 658, 663, 665, 666, 668, 670, 673, 675, 676, 678-680, 683, 700, 702-705, 708, 709, 711, 713-715, 717-721, 726, 728, 730, 732, 735, 737, 739, 742-745, 747, 749, 750, 752-754, 757, 760, 761, 763-765, 768-776, 778, 780, 782, 783, 785-787, 790, 793-796, 798, 804, 807-811, 818, 820, 823, 825, 827, 829, 832-836, 838-844, 846-848, 850, 852, 854-857, 860, 866-868, 870, 875, 876, 878-881, 886, 887, 891, 894-899, 901, 903-907, 909-911, 913, 914, 916, 917, 920-922, 924, 927-929, 934-937, 939, 941, 943, 944, 946, 948-950,

- 953, 957, 958, 962, 963, 966, 967, 972-974, 978-908, 983, 984, 986, 988, 989, 991, 995, 997, 998, 1000, 1003-1008, 1010, 1013-1015, 1019, 1022, 1023, 1025-1027, 1030-1032, 1034-1036, 1038-1040, 1042, 1044-1046, 1048, 1050, 1051, 1054-1056, 1059-1065, 1067-1069, 1072, 1075-1077, 1080, 1081, 1087-1089, 1091, 1092, 1094-1097, 1100, 1102, 1103, 1107, 1113-1115, 1120-1122, 1124-1143, 1145, 1146, 1148, 1149, 1151-1154, 1156-1161, 1163-1171, 1173-1178, 1180, 1181, 1914, 1915, 1918, 1919, 1922, 1923, 1925, 1926, 1928-1930, 2279, 2294, 2298, 2318 or 2320;
- (b) sequences having at least 75% identical residues to a sequence of SEQ ID NO: 592, 594, 595, 597, 599, 601, 602, 604, 605, 607, 609-613, 615, 616, 619, 624, 626-628, 630-641, 644-649, 651-653, 655-659, 661-663, 665-668, 670, 672-676, 678-681, 683, 686, 688-691, 696, 698-700, 702-705, 707-709, 711, 713-715, 717-722, 724, 726-730, 732-740, 742-755, 757, 758, 760-765, 767-778, 780-788, 790, 792-799, 802, 804, 805, 807-811, 814-821, 823, 825-827, 829, 831-844, 846-850, 852-857, 860, 862, 863, 865-871, 874-881, 883-887, 890-922, 924, 925, 927-930, 933-937, 939, 941-944, 946-950, 953, 954, 957, 958, 960, 962, 963, 966-970, 972-976, 978-980, 983, 984, 986-989, 991-998, 1000, 1002-1010, 1012-1023, 1025-1028, 1030-1036, 1038-1046, 1048-1056, 1059-1077, 1079-1081, 1083, 1084, 1087-1092, 1094-1098, 1100-1105, 1107, 1110, 1113-1115, 1117, 1120-1122, 1124-1154, 1156-1181, 1913-1920, 1922-1926, 1928-1930, 2279, 2280, 2283, 2287, 2289, 2294, 2295, 2298, 2304, 2306, 2307, 2318, 2320, 2330, 2335-2337, 2340 or 2341;
- (c) sequences having at least 90% identical residues to a sequence of SEQ ID NO: 592, 594-616, 618-621, 623-683, 686-692, 696, 698-715, 717-755, 757, 758, 760-800, 802-850, 852-872, 874-930, 932-937, 939, 941-944, 946-950, 953-963, 966-998, 1000-1046, 1048-1085, 1087-1092, 1094-1105, 1107-1181, 1913-1920, 1922-1930, 2279-2280, 2283-2287, 2289-2292, 2296-2299, 2303-2309, 2311-2316, 2318, 2320, 2321, 2329-2346, 2348, 2349 or 2353; and
- (d) sequences having at least 95% identical residues to a sequence of SEQ ID NO: 592, 594-616, 618-684, 686-693, 696-755, 757, 758, 760-850, 852-

- 930, 932-937, 939-944, 946-951, 953-963, 965-1046, 1048-1182, 1913-1920, 1922-1930, 2279-2281, 2283-2292, 2296-2309, 2311-2322, 2324, 2325, 2329-2346, 2348, 2349 or 2351-2368.
10. An isolated polynucleotide that encodes a polypeptide according to any one of claims 8 and 9.
 11. A DNA construct comprising a polynucleotide according to any one of claims 1-6 and 10.
 12. A transgenic cell comprising a DNA construct according to claim 11.
 13. A DNA construct comprising, in the 5'-3' direction:
 - (a) a gene promoter sequence,
 - (b) an open reading frame coding for at least a functional portion of a polypeptide of any one of claims 7-9; and
 - (c) a gene termination sequence.
 14. The DNA construct of claim 13 wherein the open reading frame is in a sense orientation.
 15. The DNA construct of claim 13 wherein the open reading frame is in an antisense orientation.
 16. The DNA construct of claim 13 wherein the gene promoter sequence and gene termination sequences are functional in a plant host.
 17. The DNA construct of claim 13 further comprising a marker for identification of transformed cells.
 18. A DNA construct comprising, in the 5'-3' direction:
 - (a) a gene promoter sequence,
 - (b) an untranslated region of an isolated polynucleotide of any one of claims 1-6 and 10; and
 - (c) a gene termination sequence.
 19. The DNA construct of claim 18 wherein the untranslated region is in a sense orientation.
 20. The DNA construct of claim 18 wherein the untranslated region is in an antisense orientation.
 21. The DNA construct of claim 18 wherein the gene promoter sequence and gene termination sequences are functional in a plant host.

22. A transgenic plant cell comprising a DNA construct of any one of claims 13-21.
23. A plant comprising a transgenic plant cell according to claim 22, or fruit or seeds thereof.
24. The plant of claim 23 wherein the plant is a woody plant.
25. The plant of claim 24 wherein the plant is selected from the group consisting of eucalyptus, pine, acacia, poplar, sweetgum, teak and mahogany species
26. A method for modifying gene expression in a plant comprising stably incorporating into the genome of the plant a DNA construct according to any one of claims 13-21.
27. The method of claim 26, wherein the plant is a woody plant.
28. The method of claim 27, wherein the plant is selected from the group consisting of eucalyptus, pine, acacia, poplar, sweetgum, teak and mahogany species.
29. A method for producing a plant having modified gene expression comprising:
 - (a) transforming a plant cell with a DNA construct according to any one of claims 13-21 to provide a transgenic cell; and
 - (b) cultivating the transgenic cell under conditions conducive to regeneration and mature plant growth.
30. The method of claim 29 wherein the plant is a woody plant.
31. The method of claim 30 wherein the plant is selected from the group consisting of eucalyptus, pine, acacia, poplar, sweetgum, teak and mahogany species.
32. A method for modifying the activity of a polypeptide in a plant comprising stably incorporating into the genome of the plant a DNA construct according to any one of claims 13-21.
33. The method of claim 32 wherein the plant is a woody plant.
34. The method of claim 33 wherein the plant is selected from the group consisting of eucalyptus, pine, acacia, poplar, sweetgum, teak and mahogany species.
35. An isolated polypeptide comprising a DNA-binding domain, wherein the DNA-binding domain comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 2279-2293 and 2296-2368.

SEQUENCE LISTING

<110> Wood, Marion
Shenk, Michael A.
McGrath, Annette
Glenn, Matthew

<120> Compositions and methods for the
modification of plant gene transcription.

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<160> 2368

<170> FastSEQ for Windows Version 3.0

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	aaaaaa

<210> 17
 <211> 60
 <212> DNA
 <213> *Eucalyptus grandis*

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	ctgggtgata

<210> 18
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 <212> DNA
 <213> *Eucalyptus grandis*

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<210> 19
 <211> 60
 <212> DNA

<213> *Eucalyptus grandis*

<400> 19

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<210> 20

<211> 48

<212> DNA

<213> *Eucalyptus grandis*

<400> 20

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<210> 21

<211> 766

<212> DNA

<213> *Eucalyptus grandis*

<400> 21

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gttatccgtc	ttgaaggcca	ttctcttgct	caagaagatg	ctttttgtatc	aagagatatt	180
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gttgcgccaa	gccatgggtc	acgatctgtt	ctgactatcg	ccttccagtt	cccatttgat	480
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<210> 22

<211> 329

<212> DNA

<213> *Eucalyptus grandis*

<400> 22

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aaaatcatct	gatgtacagg	attctctaac	gacaaatcgg	acccttgatc	tgacatcgag	240
tcttgaggtg	gggctcgcat	caacaaattg	cgttggagat	gttgcgccaa	gccatggtgc	300
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<210> 23

<211> 954

<212> DNA

<213> *Eucalyptus grandis*

<400> 23

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ccccacaatc atgcaacagg gttttgcttg tcttcaagg gggatctgcc tctcgagcat 600
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<210> 24
 <211> 338
 <212> DNA
 <213> *Eucalyptus grandis*

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atctaccaca aggcctgctt cagatgccac cattgcaaa ggcactctcaa gcttgggaac 180
tataattcat ttgaaggagt cttgtactgc cggccgcatt tcgatcagct cttcaagaga 240
actggcagcc tcgaaaaaag ctttgaaggg aacccccaa atttgcaaa cccagagaaa 300
cccgctgtgg agagagacct tcagcgacca aaggtctc 338

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<210> 25
 <211> 338
 <212> DNA
 <213> *Eucalyptus grandis*

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<400> 25
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tttcgggaaa aagaaggatc gaggatgtct gaccggttt cattaacctc accgaccaag 300
aacgagacac tctatagatg ccaggatcgg cgacacag 338

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<210> 26
 <211> 301
 <212> DNA
 <213> *Eucalyptus grandis*

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<400> 26
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aagactggta agagagagag agatagagag tttattagt ggtgagggtg ttaaaaaatg 180
ggaagagggg ggggttcagct gaagaggata gagaacaaaa ttaacaggca agtgaccttt 240
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<210> 27
 <211> 188
 <212> DNA
 <213> *Eucalyptus grandis*

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<400> 27
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ttcatatga gagagccagg ttctcaciaa caatgccgaa accaatggga actggacttt 180
ggaacatg 188

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<210> 28
 <211> 261
 <212> DNA

<213> *Eucalyptus grandis*

<400> 28

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aggggtataa	tgatttgagc	ttcaaggatc	tcaagaatct	cgagagcaaa	ttagagaaat	180
cgatcagccg	tgtagatca	aagaagaatg	agatgctttt	tgccgagatt	gagtacatgc	240
agatgagggg	ccttgtagcg	g				261

<210> 29

<211> 298

<212> DNA

<213> *Eucalyptus grandis*

<400> 29

gagaactctc	gcaatgagtg	ggatatactt	tcaaatgggg	gacaagttca	agaaatggca	60
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aatctcgagct	agagcaacat	gcttatactg	caagaaagct	gcacagactc	tggtggtgct	180
tatgtgatct	atgctccagt	tgacattgtc	gctatgaatg	tcgtattaaa	tggtggcgac	240
cccgactatg	tagcgctgtt	accctcaggt	tttgccatac	tctctgatgg	gccagagt	298

<210> 30

<211> 218

<212> DNA

<213> *Eucalyptus grandis*

<400> 30

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agaggaagat	ccagctcgcc	aaggacctcg	gtttgcagcc	ccggcaagtc	gcgatatggt	120
tccagaaccg	ccgggcccga	tggaaagacca	agcacttgga	gaaggaatac	gaagatctgc	180
aagccagcta	taacagcctc	aaggccgact	gcgacggc			218

<210> 31

<211> 240

<212> DNA

<213> *Eucalyptus grandis*

<400> 31

aaacaggcag	gtgacctctg	ctaagaggag	gaatgggctg	ctcaagaagg	cctatgagct	60
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tgagttctcg	agcagcccta	gcattgctcaa	aacgctcgac	cgtaaccaaa	agtgacagta	180
tgatctcggt	gaagttaaca	aaccctccaa	agaactagag	aatgcctacc	gggagtactt	240

<210> 32

<211> 1223

<212> DNA

<213> *Eucalyptus grandis*

<400> 32

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<210> 33

<211> 2148

<212> DNA

<213> *Eucalyptus grandis*

<400> 33

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<210> 34

<211> 273

<212> DNA

<213> *Eucalyptus grandis*

<400> 34

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<210> 35
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 <212> DNA
 <213> *Eucalyptus grandis*

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<210> 36
 <211> 238
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 36						
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<210> 37
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 <212> DNA
 <213> *Eucalyptus grandis*

<400> 37						
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<210> 38
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 <212> DNA
 <213> *Eucalyptus grandis*

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<210> 39

<211> 225
 <212> DNA
 <213> *Eucalyptus grandis*

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<210> 40
 <211> 341
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 40
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 gaaccacact tgcaaatggg ataccagccc gatccagtg c 341

<210> 41
 <211> 1286
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 41
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<210> 42
 <211> 338
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 42
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 tctgagttct ggctcgaga cgccttcaa gatcgaagc cagaggcaag ccaaacagcg 180

ccttaacttc	gagccctctc	ttacgtctgt	cctctccggc	acgaccaaag	ctaccgcgga	240
cgagcagcct	ccggcggaac	acttgatcgc	ccaggcttcg	ccgcacagcc	acaacagcct	300
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<210> 43
 <211> 219
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 43	
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aagagtgaca	catcatcggg ggtcctggtc ggaggtcaaa tatctctctg attgccatct 180
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<210> 44
 <211> 310
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 44		
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gaccagctcg	atgaggatgt tccggtcgaa gaattgtgat agtatccatg gacatcagag 180	
aggactagga	acaatcatct gccggaagaa gccggtttct caggatcctc ggacagacag 240	
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gcattagatt		310

<210> 45
 <211> 1043
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 45		
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atcgcctctc	ctcctctccc accgcatggc ctcccaaac cactctctcc accaggacct 180	
ctcctctctc	caccacttcg ccgcccagca gcagccggcg ccgcccagc accagcagca 240	
gcagcagcac	ctgcccggact cctctctctc cgtcccaacc cagctccacc acgcccggcg 300	
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gtacgagcag	ctgctgtcgg ctacacgtgg ttgcctgagg attgccacgc cggtcgacca 720	
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caacttgttt	gatggaagt tag	1043

<210> 46
 <211> 391
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 46	
ccaacaagtc	atatatcttc gacttgctcc cagtggaacg ccttcacata cttaatcgct 60
gctagcgcta	aacccccctc actcttcacc agcaaaaacg cctttctctg cacacaaatg 120

ggctcgtcgta	aaattgaaat	acagccaata	acgcacgagc	gaaaccgcatc	tgtcacattc	180
ctcaagcgca	agacgggct	gttcaagaaa	gcgtatgagc	tcggtgtgct	ctgctctgtc	240
gacgtcgctg	ttatcatctt	tgaggatcgc	ccaggggaca	gccccaagct	ctaccagtac	300
tcgtctcgcg	gtatccagga	tattgtgcag	aggcatcttc	atccagatgg	cgagactgat	360
aaccgtggcc	ctggggactt	ttcgggcgct	g			391

<210> 47

<211> 821

<212> DNA

<213> *Eucalyptus grandis*

<400> 47

ctaccgtacc	gcctcaatta	aatatcatcg	cggttgtgtc	tcttgcctcaa	ctgttccaaa	60
tcccaggatc	acagaaaaga	ttcccttcac	catagcacga	gcctccggct	cctgccgagc	120
cgctccagcc	gaaatagcca	cgctagggaa	acaggtccat	gtaacgcttc	gtaatcaatt	180
gaatgaagga	agcacgagg	gcgagccagc	gagcgagtga	aggaatagcg	cctcccagca	240
cccgatata	acagcaattc	aagaactcgc	cttcccaca	atcttcccag	tacaagctct	300
agacgctctc	gactcaaaag	catggataaa	gtaagtgcct	cggtgaatta	gactcaaaa	360
ccttctctga	ttcccctat	atcccacca	gaaagtcaat	caagcagagc	agcagaccgc	420
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tcgctcccca	gcccaaggaa	gaagaagaac	cagctggtga	acagaagaag	gttcagtgtat	540
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aacaagagcg	cccgatggaa	gtccaagcag	ctggagcgtg	acttcgccat	tcttcgagcc	720
aactcaaacg	ccctctatc	cgggttcgag	tctctcaaga	aagagaagca	atccttggtc	780
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<210> 48

<211> 648

<212> DNA

<213> *Eucalyptus grandis*

<400> 48

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agctcgaaac	caccaccctc	acgctcgggt	gcaaacgcct	cgcgccctcc	gttccaaaagc	120
tccccaccca	gaccgacgtg	gtctctgaatg	cgcgatttgt	cgacatcaag	agttctatcc	180
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tcgagatgct	gtacagaggg	ggaaatgaga	ctcccaacgc	gcagcagatc	gagcagatca	360
cggcgacagc	cagcaagatc	gggaagattg	aaggcaagaa	cgtgttctat	tggttccaga	420
accacaaagc	ccgcgagagg	cagaagcaga	agcgcaacag	cctcgccctc	tctcatgctc	480
cgagaacccc	caccacagcc	gccaccatcg	ccactgtaac	tttgaacctc	actaaggtac	540
acagaagcat	actaccatct	ttttttcttc	attccggcat	ttggttcaga	gcgctgcatg	600
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<210> 49

<211> 559

<212> DNA

<213> *Eucalyptus grandis*

<400> 49

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tcatacagat	cgccctccct	tttctctctc	ctatttctct	ctctctctct	ctctctcttt	120
ctctctctct	ctctcgagc	tttcagcaaga	ctgtcaggct	aaactgtgga	gtctcaaaag	180
ttccaacagg	aggagtgcgt	gcataaggct	caggacatga	cttgcaacta	gcgagggatt	240
ggactgatgg	cctctttttc	accaaatttc	atgcttcaaa	gcccgacga	tcaagatcat	300
gaacacccct	atcaccagca	tcagaccaga	tctctctctc	ttgcagcgct	caggacttcc	360
atggtgtttg	ctccctattg	ggcaagagat	ccatgtcctt	cacgggcatt	gcggtggcg	420
acgaccccaa	catcaaacga	ggcaacgtta	atggggagga	agactgtgct	gaagatgag	480
ggctcgagcc	agggggagag	aagaagagga	ggctcaacat	ggaacagggt	aagacattgg	540
agaagaactt	tgagcttg					559

<210> 50
 <211> 486
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 50
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 cctttcacgg gctacgcgtc gatcctcaag gggctcgagg tcttgaggcc cgcgcagcag 120
 ctgctggagg agctttgcga agctggccgc gcaatttgta ccgagaaaat gacggatgat 180
 tctgctgcga tgacggagcc tgccatggac agcttgatg gtggtgtggt gattggtatg 240
 gacgatgggt ggggtggaga cggcgccgag ttccgcggga agaaagtcgag gttaatctcg 300
 atgcttgacg aggtctgcag gaggtacaag caatactgtc agcaaatgca agctgttgta 360
 gcatcatcg aatgtgtggc ggggcttagt aatgcagctc cttacgcaaa cttggcttta 420
 aaagctatgt ccaaacattt taagtgcctg aaaaatgcaa ttgctgacca acttcagttc 480
 accaac 486

<210> 51
 <211> 726
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 51
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 atctctctctc ctctctctctc ctctctctcg ccgcggagct ctccggcgat ccgcgctcgc 180
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 tccgatttcg cgggggggatc catgggtcaa cagtgcgtga tctacagct cgtggcgccg 300
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 accctcaact acctcgtcga gaacggatcc acctattgct tagttgcagc tgaattctgt 480
 ggcagacaga ttcccatctg tttctggaa agaattcaag atgacttcaa caaagatat 540
 ggtggaggaa aagctacaac agctgctgcc aacagcctga acagagaatt tggctcccaag 600
 ttgaaggaa acatgcaata ctgcgttgac catccgaag aaatcagcaa gcttgcgaaa 660
 gtgaagctc aagtatctga agttaaagg gttatgatg aaaaattga aaaggttctt 720
 gaccgg 726

<210> 52
 <211> 395
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 52
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 ggccaaatcc actggcctcg accagaagca aataaataat tggttcatca atcagaggaa 120
 gcgtcattgg aaacctcag agatcacaca ttataaagtc atttagacat tttgttaacc 180
 attcttgcat gaggtaaat acagagcatg tagaatcaca atgccttccc ccttttttgg 240
 gggaaataaa gaggcaccaa ggatgcgatg tacacaaaga aacaacatga gcgcagcagg 300
 aagcgatcac ctaattgtcg agcaagcag acatccaggt caccctaatc agccactaat 360
 attgcgggg gatactgtcc atgagagcga attgc 395

<210> 53
 <211> 1700
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 53
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 aaggaaagga tgagttaaca agatgtcatg aagatgcaga cgtgtgtctc cagagtgaaac 180
 atacactgtg aaggatgcaa gcagaaggtc agaaaactgc tgaagagac gcaggggagtg 240

tactctgcta	atatagatgc	ggagcaaggc	aaggttaacag	tgtctcggtcc	cgtagatccg	300
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agaaggacaca	agaacggcac	ccaaaaccct	cctcctctgc	tcccacaaca	accaccgcag	420
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tgggtataagg	ctttccaaat	tectggctct	cgccggagct	ggatacacctg	gcacgatgact	540
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ctccgaggct	ctcaactcag	taagaaacaa	cttaactcag	cgaattgaga	acttggatgg	960
caaaatggat	gaccagaggg	agctatcgaa	agaaataaag	aatgaggttt	cttctgttaa	1020
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<210> 54

<211> 944

<212> DNA

<213> *Eucalyptus grandis*

<400> 54

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tctctctctg	taataattct	aatcctaaca	tgggtgtgta	tgcgagacaa	aaccagacca	180
gaccctccat	ggctcgtcta	gtccctttcc	tatccgttcc	gtgacccacc	tgggcctctc	240
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cgaagctcgc	tatgggtttt	gatcgtcgtc	tcactctcgg	tctgttttgg	aatggaggaa	360
tatggccaga	tgaacgagaa	cagtagcact	gggtccagag	ggaaacacag	cttctgttac	420
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cactattctc	tgggtgagaga	ccatcatgac	ccatcagctt	ctcaccacca	ccaccaccac	660
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caattcatgg	aagcgtata	cgcactgctg	gtgaagtacc	gggg		944

<210> 55

<211> 915

<212> DNA

<213> *Eucalyptus grandis*

<400> 55

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gggtgcgccc	tgcgcacact	atggaaaggc	cagaggaaaa	gtctagcaat	ggggcactac	120
ctgtacaaat	tggagattct	gctttcttgc	cactccaaat	ggaccacaa	tatcaacccc	180
agtcaaggac	tgcgtctgag	accaatccct	ttggagaacc	tactgtctcc	aagcatggct	240
atggtggctc	ctccatgaaa	agcaagcgac	aaacatctct	aaggagaata	aatgatccat	300
caaaagctca	tectgtgcca	aaatctagca	gatcaataca	catctctcca	tcagatgctg	360

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ctgcggaacg ctcgagagaa aactggaatg gttagagttgc aaatccttca gaaaattcaa 420
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tccagaggag gatagataag gaagggcate acattgttcc gctgctaact gacctttgga 540
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<210> 56
 <211> 498
 <212> DNA
 <213> *Eucalyptus grandis*

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<400> 56
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tcgcccggctt ctctcttgga gaattgggaa agggaactca aaaggtggtg tctctcattt 480
tcagtactcc aatatcat                                     498

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<210> 57
 <211> 474
 <212> DNA
 <213> *Eucalyptus grandis*

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<400> 57
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cgagctatcc caaagattcg gacaaacaca tgctcgcaaa acaagcggga ctaaccagga 180
gccaggtgtc taactggttc atcaacgctc gggttcgctt ctggaagccc atggtcgaa 240
aaatgtactt ggaagagacc aagagccgag agcaagctgg gtctgagaa gccacgactc 300
gcagggcgcc caccaaatcc aacaaggagc ctgctgggtt gaagtccgca tctcaagaag 360
acaatgcctt tggaaatgaac agctccatca aatccttcca atcaagcccc aacaagcccc 420
tcaatcaagc cgccatttca ccctccgaga actccaactc gacttctcca actt 474

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<210> 58
 <211> 489
 <212> DNA
 <213> *Eucalyptus grandis*

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<400> 58
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ccccctgggt ttgtggtgaa ggtggaggac gcgctgagtt ccgggagcgg tgggagcgcc 120
gtgggtggat aggaacgggc gcagctcggt gacagcgccc attcatattt tcattgcaat 180
gactaccggg gaagcttggt ggccgtcaat ggggtgcagt cagaggagca tgggaagcgt 240
gatagccgag gttactgctc agagattttc gccgctgctg aagagccgca tcaggaggga 300
ggcgctgccta attgggggtt ggccgtggcc ctagttttag gttttcgctt ttgtgtatgt 360
tctcgtaaat ggttcaagtc aaatatgtgc tcatgagact atgcaatgtt tcacgaaggg 420
gaagaatctg taacagttta ctggaacttt ggacatgaat aaaaactgacg tggttggtca 480
aaaaaaaaa

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<210> 59
 <211> 456
 <212> DNA

<213> *Eucalyptus grandis*

<400> 59

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cagacacaaa	acgcaaacctc	cgcaccact	gacacgagt	gtgaatcggt	ggtagaccag	180
ggtcagcacc	atttgactcc	tcagcatcca	ccaagggatg	ccagccctgc	aggacttttg	240
tcatttgcag	aggaacactt	aacagagttt	ctttcgaagg	ccactggaac	tgctgtggag	300
tggttccaat	tgcttgggat	gaagcctggg	ccggaattcca	ttggaatcat	tgtctatttg	360
caaggatgca	ctggtgtggc	agcacgtgca	tgcggccttg	tggtgtctaga	accttcaaga	420
gtgtctgaaa	tcttcaaaaga	tcggccgtcg	tggtat			456

<210> 60

<211> 455

<212> DNA

<213> *Eucalyptus grandis*

<400> 60

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attgtctatc	gagcaagttc	tgtacttggg	gaagagcttt	gagactgata	acaagcttga	180
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attggttccaa	aatcgagggg	caagatggaa	aactaagcaa	attggagaagg	atttcgataa	300
attgcaagct	agtttttaact	gtttgaagtc	tgattatgaa	agtccttcca	atgagaagga	360
gaagctcaaa	gctgaggtta	ttcatttgac	acaccagcta	gagcaaaagga	gcaacgggaat	420
tctgaacctat	tcgacatatc	tgaacaattg	cacac			455

<210> 61

<211> 406

<212> DNA

<213> *Eucalyptus grandis*

<400> 61

cccaaatcaa	atgatatcgg	gtgaaagatt	ttgagttttt	tttttttttc	atttgaattg	60
tcaccgtact	tttttcgaaa	ccgggcacaa	tggagaataa	attcagggggt	acaatcattt	120
gagttcatac	gacatgccta	attacatgaa	ctgcgaaact	caaaagtcca	atctttcttc	180
ttccctcgca	tcagcgcccta	attctgaaaa	aaattgagcg	tcagcaagtg	tttaggggatg	240
gattttctgt	tttgcctagag	gggggatggg	ctatggggaat	tgaggaggcc	acgaagaggc	300
aatcgatttt	cagctatcct	gaggatcttt	acaaacgagga	atattatgat	gaccaggcgc	360
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<210> 62

<211> 530

<212> DNA

<213> *Eucalyptus grandis*

<400> 62

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cagccgtacg	caggcgcgca	cgctcgacag	cgcattctct	ctccccctgt	tcgctggcgg	180
aggcaggcag	cgaggcaggc	agacactcgc	cgtgccatga	gaagaaggcc	gtgatggaaat	240
gggagaagca	ggaacagcac	cacccccacc	accaccacca	ccccccacct	caccgcgacg	300
agcagcagca	gcaccaccag	cagcagcagc	agccgcagca	gcagcagcaa	gcgaaggagg	360
ctcagcagca	cgacgacgca	caggggggag	agggcatggg	taacgggagc	gcggccggga	420
acggggggcg	agtgctgtac	gtgaaggtga	tgacggacga	gcagctggga	accctccgga	480
agcagatcgc	cgtctacgcc	tccatctcgc	agcagctcgt	cgagatgcac		530

<210> 63

<211> 452

<212> DNA

<213> *Eucalyptus grandis*

<400> 63
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 ggccacacct tcaactacct cgtcgacgat ggccctcaett actgtgtggg tcagtttgag 180
 tctgttgggg gccagatttcc aatggctttc cttagcgga tcaaggagga ctttactcac 240
 agatcgcagc caggaaaagc tgcaacagca tctgttaata gcttgaacag ggagttggg 300
 cctaaactca aggagcacat gcaatattgt gttgatcatc cggaagagat cagcaaaact 360
 gctaagggtga aagctcaggt atcagaagtg aaggagtaga tgatggaaaa tattgagaag 420
 gttcttgatc gtggtagaaa aatcgaaact ct 452

<210> 64
 <211> 354
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 64
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 gcaaaatacc attaacggat cttgcagcat ggaaagcatt tttagagaggt acgagagata 180
 cacttatgcg gaggcgacgc aagtggccac tgattccctt caagtgacag gaagttgggc 240
 gcttgaatat cccaagctcg tggctaggat cgaagctctg cagaggaaca taagaactt 300
 gagcgagaaa gagcttgatc ccttgagctc gagagagctg cagtatttgg agca 354

<210> 65
 <211> 1239
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 65
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 cactaatagc ccatctctct tttctctctc ctctctctct gcgcgatttg ttttgttccg 180
 cgaaagaaga agagataaat attgaagtga agtgaacagc tgcgatggcg acttactaac 240
 accagagctc atctgaccca gatggagccc tacaaccctt cgtcctcatg aaccctcgca 300
 gctacgtcca ctactccgat cccccgcctc cgcaccagca accctcgccg atcttctcca 360
 actctccca cgcgcggcgc cccgcattcc agaccagca attttagagg atccccctac 420
 ccggcagcgc gcgcgactcg cagccctcgt ccatgcacgt caaccacgat ctctctcca 480
 tgcatggctt catgctctcg gtcaggtata acctctggag ctccctcgac cgtccaccgg 540
 cggcgctgta ggctctccgc acccaccagc agcaggggct etcccttagc ctctccccgc 600
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 gtaagccggg tggagaatca gcggcactga aggaggaagg aggtggcgac gccagtggtg 960
 agcgcggcgc agaactgtct atggctgaga gccaggaagt tcagatgaag aaggctaaag 1020
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 tcgtgatata ctgcttttag caagctcgcc ggatttgctc tgcaaggagc tacacggccc 1140
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 ttcggggcgc taataagagc ttgggcgagg aggatggcc 1239

<210> 66
 <211> 371
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 66
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 cgcaaaatcc agttaggcaaa agacctcgga ttgcagccac gacaggtagc gatattggtt 120
 cagaaactgc gtgcacgggt gaagacgaag cagctagaga aggatattga aactttgcaa 180

gtctcttctta	acacccctgaa	gtcagactac	gacactctca	tcaaggagcg	gaatgatctg	240
aaagccgagg	ttctttaaact	cacggacaag	ctgtcttcca	agggaaatga	gaaggagagt	300
tccgagtctg	ccagcaaatc	atctcaagg	ctattccaga	accctattgc	tgattctgtt	360
tctgaggacg	a					371

<210> 67

<211> 387

<212> DNA

<213> *Eucalyptus grandis*

<400> 67

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tgctccatgag	ctggaagact	tgatcagcag	caatgagctc	atcctcgagg	agatggatct	120
tgaaggagcc	ggctcacacg	cgctgcattg	cgctgtgtgt	gtggccatt	tggaatttcgt	180
ctgagagctc	ctgaagcgta	cgccaaagct	tgcggaaaag	gtgaaccagg	atggtttcag	240
cccgctgcac	atcgcgctg	ctcgaggtga	gttcgagatc	cgagggagc	tcttgaccaat	300
gggtccacac	ctgtgtctcg	tgaaggagcg	ggagagaaga	atccctttgc	attatgccgc	360
tatgaacggg	aaggtcagat	tcatgaa				387

<210> 68

<211> 479

<212> DNA

<213> *Eucalyptus grandis*

<400> 68

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aggctctggt	ccagaaacagg	cgagccacga	cgaagctgaa	gcagacggag	gtggattgag	180
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ccaccctcac	catgtgcctc	tcttcgcagc	gggtgcgcgc	ccgctctccc	ccctccgcgc	360
tccgcccgc	ctctgcgcgc	gtcccggccc	accccgcgc	cgctcccctc	cttcaaccaat	420
gggccctctc	ggccgcttta	gaaatagtgt	atccccccgg	gctgcaggaa	tccgatctc	479

<210> 69

<211> 684

<212> DNA

<213> *Eucalyptus grandis*

<400> 69

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aaacttggtga	taataaaaag	aagccctgtt	tagctataaa	gggaagcccc	atcctttctc	180
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gcgcgctctg	caagcaaatg	aagaaggagg	acaaggaaat	tgccgagaga	gaagatcaag	360
atacagaaga	tagacaatgt	gacggcgagg	caggtgacgt	ttcttaagag	gagacgaggg	420
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aggtaacccc	tccaccacaa	taatcttgag	aatatggacc	aaccttctct	cgagctgcag	600
ctggagcata	gcaataacat	gaggttaagc	aaggaaagtg	cagaaaaag	ccatcgactc	660
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<210> 70

<211> 356

<212> DNA

<213> *Eucalyptus grandis*

<400> 70

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ggattatgat	tacctcaaat	cttcgtacga	ttcccttctt	tccgactatg	ttccatctt	120

gaaggaaaac	gagaagctca	aactggaggt	ctattccttg	acagaaaaac	ttcaggggcaa	180
ggaagtccat	ggagcaccac	tgacaggccc	ctcggagcca	gctccgctgg	aggaggctga	240
tgtccaggcc	gtccaattca	gtcgaagggt	ggaggatagg	ctgagcaca	ggagcggggg	300
aagcgagtg	atcgacgagg	aaggteccaa	gcttgtggac	agtggaacct	cgtaacc	356

<210> 71

<211> 725

<212> DNA

<213> *Eucalyptus grandis*

<400> 71

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actccggcgc	ccggcggcct	cagatcaccc	cgcttcagca	gcagcagcag	caagcgctga	120
gcaaagcgga	gaaggtggct	gctttcatgg	aggccactg	agtcttcagt	ccggagcttc	180
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ccccgaagag	ggcgcgggtt	ttctgctcgc	cggacgaact	tttcgatgag	gaatattacg	660
atgagcagat	gccagaaaag	aaacgtcgcc	tcaactctga	gcaggtgctt	ctgctggaga	720
agagc						725

<210> 72

<211> 523

<212> DNA

<213> *Eucalyptus grandis*

<400> 72

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gatgaaatgt	acgggctctg	cgccggcgcc	ggcgaggagg	gaggaggagg	aggagaggag	120
tactccgaga	ggcgctgatg	gtcgccggaa	aaactgggtc	tgccgtcaga	gtaccaggcc	180
tggtctgtct	cgcccggttg	tagggataat	cgaatcccca	tgtaacgggt	cggtcgagg	240
gagttctgtg	cgctcgcgct	ggcctatgtc	gagacccgct	cggtcacacc	cgaccaagag	300
gatcgcgccg	agacagcgat	caagtccaag	attaaagccc	acccttcgta	ccctcgtttg	360
ctccacgcct	acatcgattg	ccagaagggt	ggagcaccac	cggaaagtggt	ggggctgttg	420
gacgaaatcc	ggccagagaa	cgccgtgtgc	aagcgagacg	ccgcccgttc	tacatgcctt	480
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<210> 73

<211> 646

<212> DNA

<213> *Eucalyptus grandis*

<400> 73

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gtacaccccc	gagcaggttg	agggctctga	gcgggtctac	aacgagtgcc	ccaagcccgag	600
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<210> 74

<211> 471

<212> DNA

<213> *Eucalyptus grandis*

<400> 74

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aaacgatggc	cgggtgaggag	ccttattctg	ccgacacgaa	ctcggacact	ttcgctgatg	120
aagaaaagct	gattccgagt	tcttccgagg	ctcttgagtc	cgcttgggtt	cctacttctc	180
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accaagtc	tttctcgag	aggcactttg	aggtcgagaa	caagctcgag	cccgagagga	420
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<210> 75

<211> 766

<212> DNA

<213> *Eucalyptus grandis*

<400> 75

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gttatccgtc	ttgaaggcca	ttctcttgct	caagaagatg	cttttgatc	aagagatatt	180
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aggcatgttc	tgataatttg	attgaattgg	tcttcttttg	gtgcatctca	ctctgtgttt	720
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<210> 76

<211> 443

<212> DNA

<213> *Eucalyptus grandis*

<400> 76

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<210> 77

<211> 529

<212> DNA

<213> *Eucalyptus grandis*

<400> 77

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acttctctgag	agttctggtt	ctattcttgc	ggcctggcta	tttgagcatt	ttcttcattc	180
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gccaaaacaa	ggagatatca	agtcctccat	ggaggacggg	gtggaagaag	tgcaacagag	420

ttcaacagct	acacagagat	gcagctcagg	ccagctcatg	gactcatcat	tcgaccggac	480
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<210> 78

<211> 941

<212> DNA

<213> *Eucalyptus grandis*

<400> 78

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cggcgactta	gaaattcttt	ggagggaaatg	gcaaacgaag	gcaagagccc	tagcataattg	180
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aaagaccatg	tgcaggcact	acgtaaaaat	tgcccaatgg	tcagcagtgga	gacacagctgt	600
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<210> 79

<211> 436

<212> DNA

<213> *Eucalyptus grandis*

<400> 79

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acgttgccgc	ggcctccgct	gcctcagacc	aagaacagca	gcacatctga	gcccagcaga	180
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gcattggagga	ggaaccaggc	gggctgcccgc	cgtacgagac	cgctgggatg	ctactctgaga	300
tgttcaattt	ccctcccggc	gggtgcagccg	ctgccgaatt	gctggagcag	ccgatggcgt	360
cgggttatcg	ggctgcccgc	ccatcactgc	caaccgtgag	tggttacggct	caaaaaacc	420
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<210> 80

<211> 377

<212> DNA

<213> *Eucalyptus grandis*

<400> 80

atcggtgatc	acatggattt	agagccatgg	agcgtgcctg	aagtattgcg	cccactttac	60
gagtcgtcaa	ctttgtctgc	acaaaaggaca	acgatggcgg	ctttacgcaa	tctgaggcag	120
atctctcaag	aagttttccc	gccaatgttc	actgggtggg	gaagaagacc	tgccgcactg	180
cgctgcttag	gtcagagatt	gagcaagggt	tttaacgaag	ctgtcaatgg	atttatggag	240
gatggttggt	ctatgttgga	aagtgatggc	gtcgatgatg	ttactcttct	catataactca	300
tcgccaacca	agatggcagg	cgtgaacatt	tcttacgcaa	gtgggttttc	ttcaattgact	360
agtgccgtct	tgtgtgct					377

<210> 81

<211> 478

<212> DNA

<213> *Eucalyptus grandis*

<400> 81

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tcacttcgtt	cagagaggag	agagcctgtg	agagttagtg	tcggagatgg	cgacggcctt	180
tcagggagac	gacgagaagt	gcaaggcctg	tgacaagacc	gtgtatctag	tagactcagct	240
cactgctgac	aacaaggtct	tcacacaagg	ctgcttcaga	tgccaccatt	gcaagggcac	300
tctgaagtgt	agtaactatt	gctcctttga	gggtgttcta	tattgcaagc	caactttcaa	360
tcagctcttt	aagatgactg	ggagcttggg	taaaagtctt	gaaggcactc	caaaaactgt	420
caatagatct	tctgagcagg	gccaaagtaa	tgccaaagtc	tcgagtattg	ttgcggga	478

<210> 82

<211> 493

<212> DNA

<213> *Eucalyptus grandis*

<400> 82

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agatgagtaa	gctatccaaa	ttgaaggctc	agatatcaga	ggtcaaaagg	attatgggtg	180
ataatattga	aaaggtgttg	gaccgtgggg	agagaattga	acttctggtt	gacaaaacag	240
agaacctaca	attccagggc	gacattttcc	aaaggcaagg	aaggcactg	cgtaggaaga	300
tgtgtttcca	gaattctcaa	atgaagggtg	tgtgtggctg	agcagttgtc	gataaatat	360
tcttctgtgt	gcttatagca	aagtggggaa	gtaaaataaa	cttgttctca	ggatgtaaaa	420
agaaaaggta	caatgatgatt	ttgtatctgg	atatgtttgt	tgtgtatggt	agctagccta	480
ccacttagga	ttt					493

<210> 83

<211> 764

<212> DNA

<213> *Eucalyptus grandis*

<400> 83

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caatccaaac	tfoaatgcgc	tgcttccacc	agttctctct	ccttcttctc	ctttttgcc	120
ccagtgaaga	attttgtacc	tccatagata	agcacacccc	aaccagacaa	agacacaatt	180
acaaaatgct	cttctctcca	tttagatgga	ctcaaaagggt	catcccaaac	attaactctt	240
gggtggtcgt	ggatgatcgc	cgcccgccgc	agggcgccgc	gctggccgaa	ggcgccggct	300
tgggcgacac	gcccgcgaga	ggagggcgcg	gagagagcgg	cgcccgccgc	agctgcgac	360
gcggttaacg	cagtagccat	ggctggatcg	agagagagag	gagagagtgt	gctcttgata	420
gccttttttg	gttttgtatt	gagaattcac	tctgttcaga	gaggagagag	gctgtgagag	480
tagtgatcgg	agatggcgac	ggcctttgca	gggacgcagc	agaagtgcac	ggcctgtgac	540
aagacgtgtg	atctagttag	tcagctcact	gctgacacac	aggtcttcca	caaggcctgc	600
ttcagatgcc	accattgcaa	gggcactctg	aagttgagta	actattgtct	cttcgagggg	660
gttctatatt	gcaagccaca	tttcaatcag	ctctttaaga	tgactgggag	cttgagataaa	720
agttttgaag	gcactccaaa	aactgtcaat	agatcttctg	agca		764

<210> 84

<211> 490

<212> DNA

<213> *Eucalyptus grandis*

<400> 84

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cacagtgcac	attcttccat	ctggcttcac	gatctccagc	gatggccgga	ttggcacaag	120
ctccagcaag	ccagcaggta	cacttctcac	tgtggcggtc	cagatatgtg	tttccagcca	180
ctcaggtcca	gagcagctca	cggtggaatc	cgtaggcagc	gtgaacactc	ctcattagtgc	240
gaccgttcag	aaaattaggg	ctgctctaaa	ttggctcgcc	gcggaatgag	tttttttttt	300
ttttaaatatt	tgactagctg	gaatgatctc	tctatttgtg	ttgatgggtt	gtaccgaaag	360
atgagatgat	ataatttcat	agcgagatga	tttaatttca	catcgctacc	aacacgtggg	420
gagtaacaac	agttctctgc	cataatgatc	taagttgggtg	tttatattgg	aatgactttt	480
tcgggaactg						490

<210> 85
 <211> 427
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 85
 atcaaatgga gagagcagct cgaaggaggca atatccatga gctgaatgac ttgatcagca 60
 gcaatgagca aatcctttgag gagatggctc ttgaaggagc cggccacacg ccgctgcaca 120
 tcgcttctgat gggcgcccat ttggatttca tccgagagct cctgaagcat atgcggaagc 180
 ttgcggaaaa agtgaacccg tgtggtttca gccactaca catcgccgca gctcgtggtg 240
 atgttgagat cgcgaaggag ctcttgaaag tgaatacaga cctgtgctcc gtggaggagc 300
 gggagagaag aatcctcttg catgatgctg tcatccacgg ggaggctcgt gtatggaga 360
 tactactatc tacttcacct gactctgttg aaaagaaaac cgcccggaag gagaccgtgc 420
 ttcacct 427

<210> 86
 <211> 365
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 86
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 ttgtgctgaa ctacttttgc ctccaattga cgcctccttt tctgatgat caccattat 120
 tcttcggga ttccgcatca ttctcttga tccaggatcg gatgccttca gcccaaacgc 180
 gacacttgat ctgctctcag ctcttgatgt tgggtccaca ggcaacaaag cggtcgggtga 240
 taattctggt catagtggaa acaccaaatc tgtgatgact atagccttcc aattcgcatt 300
 tgaattacat ctccaagaga atgtggcgct catggctcgt caatacctca gaagtattat 360
 agcat 365

<210> 87
 <211> 180
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 87
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 tcccccatct cctcaaatgg gcatagatga tctgtgcaac acaggccttg ttctgagctc 120
 tggctcgcag acgcccctca agatcgaagc ccagaggcaa gccaaacagc gccttaactt 180

<210> 88
 <211> 468
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 88
 aaatcaatgc ccccgaaagc gacccttcac ttacaccgc catcaataga cacccttctc 60
 cggagaccga ggccaccacc ctctccagg ccaccacgc catgatctcc tccgctgtcc 120
 aggtggcggg ccggcgccac atagatgacc cctgccgcgg cagcatcgga ggcagcacgg 180
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 caacggcgga cgtgtccctc accctggggc tgcgccacgc cgggaatgtg ccagagaaga 300
 gctctttctc ggttaccgac ttggggcggt gttaattagt aattaaattt ttgctgtca 360
 tctagctaac tttgggaaaa aaaaacaatt tagaaaaaga aaacctttct ttttctcca 420
 ttatcattaa tctagcttaa aaacaagata caccacccct caggaaaa 468

<210> 89
 <211> 441
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 89
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acgatccaaa	aggaaaatgc	agaatgcaac	cggcaacaat	actgaatctg	aagctgaagc	180
agaagttgag	tccccaaagg	agatgaagac	aaaaccggag	atctttcaat	ctcagcagaa	240
tcctgtatca	aggaaacgaag	atttatgctt	cgaagccct	gagattagct	cagatcttca	300
ttttgtgat	tcacagacca	aagtggagag	catggtttat	ccagatggca	gtttgagatc	360
caggaatagg	aaccttagcc	agctatcttt	ctatgatgcc	atgatgtcaa	attcaggcgg	420
tcttgacaga	aatgagcatc	t				441

<210> 90

<211> 744

<212> DNA

<213> *Eucalyptus grandis*

<400> 90

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tacaattgga	tccataaaca	gatgggcctg	ccctactcog	gacattggac	ctggcctcta	120
cgtctggaggt	gggactctgt	ggtgctcgtc	ctacttgtga	agctgatgct	agcaacctaca	180
acctgcgac	tgtcctcacc	atcgcatcc	aattcgtgtt	tgagaacat	ttacgggaca	240
ctgttgccat	catggctcgt	caatatgtgc	gtagtgtgt	gggatctgtc	cagagggttg	300
ccatggcaat	tgcacactcc	aggctaggtg	gccatctggg	gccaaaaatc	ctctctggtt	360
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ctgaactgtt	gagaggggac	tcccaacgtg	gtgatgctgt	tttgaaggaa	ttttgggacc	480
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tgtctgaaaa	ggttcttctg	gaagggtgca	ggaaggttct	ttcttcggag	ttcccgaaga	660
tcatgcagca	gggtatcgcc	tatctgccag	cggagtagtg	catttctagc	atgggaaggc	720
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<210> 91

<211> 509

<212> DNA

<213> *Eucalyptus grandis*

<400> 91

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gaagtgtggt	tcaaaaacag	gagagccagg	acgaagctca	agcagaccga	agtggactgt	180
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gcgcgacga	agggcccttt	tctgatgacg	acaaaatcac	acttatcacg	tcatcaactt	420
accaatccat	ctgctgtctg	ctgattagaa	gttattaggg	tttttagagat	attacagaga	480
gagagagaga	gagagagaca	tatatagac				509

<210> 92

<211> 363

<212> DNA

<213> *Eucalyptus grandis*

<400> 92

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aaaaccattg	aaaagaacct	tgttgcgtgt	ggaccacaac	catcatcaac	aaaatcagct	180
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agtcacaacg	aagtatatgcc	tgcacctctt	cttcaggttaa	tgacagatga	ggagaagcat	300
aaactaggcc	aggaattgga	gtctttgtct	ggagagatgc	ccgaaaaat	tattgatattt	360
ttg						363

<210> 93

<211> 110

<212> DNA

<213> Eucalyptus grandis

<400> 93

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acacatctgt	aatggaggat	gggagctctg	tggtatgtga	aagatcaatt		110

<210> 94

<211> 440

<212> DNA

<213> Eucalyptus grandis

<400> 94

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aggagtccat	gaaaaagagg	aagaagggga	agctcccga	agaggcccg	caacaattgc	120
ttgattgggt	gagtcgacac	tacaaatggc	cttaccatc	agaatcacag	aaactagctc	180
tagcagaatc	aactggacta	gatcagaagc	aaatcaacaa	ctgggtccat	aaccaaggga	240
agaggcactg	gaagccatcg	gaggacatgc	aattcgtgg	tatggatgcc	actcaccctc	300
attactacat	ggacaaacatg	ctcggcaatc	cctttcccat	ggacatctct	ccgaccttgc	360
tttgaagtct	atgggtgata	ttgctaatat	tattcgaccc	tagtgtcatt	atgagctcta	420
aatgtgctct	ttccgagtcg					440

<210> 95

<211> 413

<212> DNA

<213> Eucalyptus grandis

<400> 95

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aagaccctat	ggatttgaag	acaatgacca	agagggtcga	atcagagcaa	tattatgtta	120
cgctcgagat	gttcatttga	gatgtcaaga	ggatgtttgc	taatgcacgc	acctacaatt	180
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tacaattcgaa	tctccagtct	ggtgccggaa	aaattcaaca	gtagagcatt	cggtagactg	300
gagggcctga	cttactctct	ctctatatga	atatgtggag	ccttggatgc	ttactctgat	360
ccatgatgct	gctggggaat	taactagctt	cgattgacca	tgtaactgaa	gac	413

<210> 96

<211> 706

<212> DNA

<213> Eucalyptus grandis

<400> 96

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agagagagcc	atcaccaaaa	gcccgaaagt	catggggaga	ggaagaatcg	agatcaagag	180
gacgagaac	acgacgaacc	gtcaggtcac	ctctctgcaa	agaaggaaacg	gactgttgaa	240
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cgagtacctg	cagaaaaaag	agattgagct	cgaaaaatgaa	agtgtgttcc	tccgcacaaa	660
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<210> 97

<211> 396

<212> DNA

<213> Eucalyptus grandis

<400> 97

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ttacattctc	gaaaaggcgt	tctgggttgc	tcaagaaggc	gcaggagctc	tctatcctct	120
gtgatgctga	ggttgctgtc	ataatcttct	cgaatactgg	caagctttac	gagttctcca	180
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aagatgaaat	cgcagagctg	cagatgagac	aactaaggct	actgggcaag	gactttgaatg	360
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<210> 98

<211> 379

<212> DNA

<213> *Eucalyptus grandis*

<400> 98

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tctcagctgc	aaaagaagga	aaaatctcta	caggagcaga	ataacgtgct	ctctaaaaaa	120
atcaaaagaa	atgagaaggt	aatgagagag	agtggacaat	gggagcagca	aaccccagca	180
ccgaccacat	ctctcttcac	gctacaaccc	actttgcctc	ttctctccct	caccattggc	240
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cgaccagcca	acacgctcat	gccgccttgg	atgatacgcc	gttcaaatga	atagagagat	360
agagaccaac	aacattctc					379

<210> 99

<211> 421

<212> DNA

<213> *Eucalyptus grandis*

<400> 99

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ctctctctta	gacggagtga	agacgggtga	gataaacagg	aagcagcaga	aggtgacggt	180
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ctacgacaag	aaggcacctc	ccggccacgt	gaggaaggct	gagccaaacc	ccaccagtgc	360
ctcgtgacc	cggcagcagg	acccttacat	gaccctcttc	agcgagcaga	accccaatgc	420
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<210> 100

<211> 460

<212> DNA

<213> *Eucalyptus grandis*

<400> 100

aggatcgaga	acaagataaa	ccggcaagtg	acgtttcgga	agcggaagaa	cgggtcgtct	60
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agccggcgca	agctccatga	attctgtagc	ggcccagggt	atcgcgctatt	tgtatgttat	180
cacttgtttt	tctcgttaat	gttatgatga	gacatcaggg	ggagaaaccc	agaactcgaga	240
tcacactgtc	tcatataaatt	ctctcgtcca	aattctttcg	ggaaacccctc	agatcttgggt	300
gactctggatc	ttgggtcgtgc	cctaaggaga	tggcgattta	ttggtttttc	ttctttttttg	360
ggttttcagtt	tcttgacctc	ttttgcgac	tttcggttca	ccatgaaaaa	aagcttttcag	420
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<210> 101

<211> 423

<212> DNA

<213> *Eucalyptus grandis*

<400> 101

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ggaggtaaat	cgaaatgatt	ctaggagtga	agaagaggtc	gagctatttg	atcagatgga	180
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ggccagtaca	aaggagggtca	atgctgctat	tgccactcta	tcaaagaaac	catcgaaaaa	300
cactttgttt	gctagcaca	tagtggaacc	taatgaaccg	gtatcggaat	cagtgagaaa	360
gagggggcgg	cccaagagta	aaaagcatcc	taattacaag	gaactagatg	atgacaatga	420
aga						423

<210> 102

<211> 381

<212> DNA

<213> *Eucalyptus grandis*

<400> 102

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ccggtataaac	caagggcgag	acaccacggc	tcaagttgct	cgaccagagc	ctgaggcgagc	120
agagggcttt	ccaccagatg	ggcatgatgg	agcaagaggc	ctggagggcg	cagcggggcg	180
tgccggagcgc	gtcgggtcaac	atactgcgtg	catggctctt	cgagcatttc	ttgcatccgt	240
atccaaagtga	cgctgataag	catctgttgg	ctcgacagac	tggctctccc	agaaaccagg	300
tctcgaaattg	gttcataaat	gccagggtcc	ggttggtgaa	acccatgggtg	gaggagatgt	360
accagcaaga	gtccaaagaa	g				381

<210> 103

<211> 473

<212> DNA

<213> *Eucalyptus grandis*

<400> 103

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ctagagagat	atcagaagtg	caactatgga	gccttgagc	cgacgtgtc	cgcgagagaa	120
tctctggagt	taagctgtca	gcagggaat	ttgagactta	aggcacgtta	cgaagcccta	180
cagcgaaact	aaaggtattg	aagtttctat	tgtcctttta	attaaatgtc	agcattcgcg	240
ggatgtagtt	attttctctac	atgattgggg	tctatctgtg	tcatcgtaa	ctaggaatct	300
tctggagaa	gaacttggcc	agttaagcag	caaagaactc	gagtccttgg	aaagcacagct	360
agatgggtca	ttgaagcaga	tcagatcacg	aagagtatgt	aaattatatt	acagaaattct	420
atctaagtca	catctcgagt	tatttgtaat	acaagttact	gtgtcaatcg	ctg	473

<210> 104

<211> 634

<212> DNA

<213> *Eucalyptus grandis*

<400> 104

caaaaaataga	ggatgttagg	gaggagatgc	tacggaaaag	gagagccgga	aaattaccgc	60
cgcatactac	ttctgtgttg	aaaaatttgt	ggcagcaaca	ctcaaagtgg	ccatatccaa	120
ctgaagatga	caagggcaaa	cttgtggagg	agacaggatt	gcagctgaag	caataaata	180
actggttcat	caaccaacgg	aagcgaaact	ggcacaacaa	ttcccaatcg	gtcaccctct	240
tgaagtccaa	gcgcaagagg	tagggcgaac	ggaccatcat	gcttgtcttt	gtgccgctaa	300
ctgaaacacg	aaacttatca	atcggttattg	actctgatat	aaacttctga	tcgactgggg	360
gtatacttta	tagctagagc	tgaacacttg	tgggtgggga	tcaagcagtg	atggtaagta	420
gatgattcat	tatggaatta	gggcctgtaa	caaatgatgc	aaattccagt	agattacata	480
cacaaaaacc	agaaaaatga	tgtctttttg	tttgggtaga	agtgtctctg	ttgcctaate	540
ttctttgtat	ttaggcccaa	aaacaaacac	atgttgattt	gttttctgtt	tttataaaat	600
tgttgttttt	ggcagtaaaa	aaaaaaaaaa	aaaa			634

<210> 105

<211> 483

<212> DNA

<213> *Eucalyptus grandis*

<400> 105

ctccagtggg	tatcacagga	atgcaggcgg	tgatgaccgg	ctgtgactct	agcaacatag	60
ccgcaactgcc	atccggtttc	tcgatctctg	ccgatgggat	cgagtcgagg	ccctctagtca	120
tcagctcaag	gcacgaggag	aagagctcag	aaggaggatc	actgtctcaca	atagcttttc	180

aaatcctaac	aaataccctct	cccacagcca	agtttaactgt	ggaatctgtg	gagctgtgtca	240
acactctcat	atcctctgtaca	ttgcggaata	ttagaacgag	cttgcgaatgt	gaggatggat	300
gacaaactta	agtttttattt	aaagtagata	gggataatta	actgtacaac	taataggggtg	360
gagaaaaatt	agcaggttcaa	aagcaatggc	tttttttcat	ttgtctcttg	gttgagattgg	420
aaggcttggc	ttggttttaa	gcatgttttt	atgcagaaag	tggtgactgg	cgggcaagag	480
aga						483

<210> 106

<211> 404

<212> DNA

<213> *Eucalyptus grandis*

<400> 106

tcgagaacaa	gatcaacag	caagtgcagt	tcgcgaagag	gaggaatggg	ctcctcaaga	60
aagcctacga	gctctccgtg	ctttgcgacg	cggaggtcgc	tctaatcatc	ttctcccata	120
gaggaagagct	gtacgagttc	tgacgagcgt	caagcatgct	caaaaccttg	gaaagggtatc	180
aaaaatgcga	ctatggagca	cgggagccta	gcatctctac	cggggaagca	caactggagc	240
taagcagtcga	gcaggaatat	ctgaaactta	agggcagccta	tgaagcccta	cagcgaaacgc	300
aaaggaatct	tcttggggaa	gaattaggcc	ctctgagcag	caaagaactg	gagctctctgg	360
aaaggcagct	cgattcatcc	ttaaagcaga	ttcgcattcc	tcga		404

<210> 107

<211> 527

<212> DNA

<213> *Eucalyptus grandis*

<400> 107

gctagaaaag	cgatccattg	gtcaggcagc	agaacagctt	tatctattct	cttgtagcag	60
gcgagtaga	cgaagtaaca	tagcccacca	tatgcaagag	ccgaacttgg	ccatgatggg	120
cggcggtggg	ggcgcgccgg	gcggggcgcg	ggggatcgct	gggtggcgcg	gcggggggcg	180
gggacgagag	gcgtcgttct	cgggcgagca	ccgcgagcgc	cagctcaagg	gggagatcgc	240
cagccaccgc	atgtacgagc	agctgctgtc	ggccccagtg	gcgtgcgcgc	gcgtgcgcgc	300
cccgatcgac	cagctgcgcg	tgatcgagcg	gcagctggcg	cagtcgcacc	acctcctgcg	360
ctctcagcgc	tctctcggtc	agcacggcca	cagcagcctc	tctcctcagc	gcgtgcgcgc	420
gctcgacat	ttcttggcac	aatatctggt	ggtactatgc	agcttcaagg	agcagctgca	480
gcagcagctt	cgagtcacat	ccgttgaagc	cgtcatggcg	tgctcgtg		527

<210> 108

<211> 482

<212> DNA

<213> *Eucalyptus grandis*

<400> 108

cccatccga	tgagaagcaa	aggcagcaac	tgagcaaaaca	gctggggcctc	gctcctaggg	60
aagtgaagtt	ctgggtccag	aatcgagaa	cgcagctcaa	ggcaattcag	gagcgccatg	120
agaattctct	gttgaaaaaca	gaaatggaga	agctcagaga	tgaaaaacaaa	gccatgagag	180
accatacata	gaaattcttg	tgcccccaatt	gtggctcagc	caccacaagg	agagataaccg	240
cttgacaac	tcaggagcag	caactccgaa	ttgaaaaatgc	tcgactgaaa	gccgaggtcg	300
agaagctcgc	aacagctctta	ggaaaagtaca	ctccaggagac	ggcatcgctc	tcttgcctag	360
ccgggaacga	ccaagagaac	aggagctcct	tggatttcta	caccggaatc	tttgggctcg	420
acaagtcgaa	gatcatggaa	ttggtgaacc	aagcgatgga	agagctcaag	aagatggcta	480
ct						482

<210> 109

<211> 343

<212> DNA

<213> *Eucalyptus grandis*

<400> 109

ctcttcagct	gaacccctcc	tctccccatc	tctctttttct	tgctatgacc	aacgacaaga	60
acaccaggaa	caaaaaaaa	aaaaagcttc	aataaaaaat	ctctacaggc	agagagagag	120

agagcaagaa	ctcaagaaac	cctaaactta	tctagccccg	tgctcatcgaa	gagagcgagg	180
gagaaggaga	gggagagggg	gagggagagg	gagagagagg	gagtggaagt	ggaggaacga	240
gcgagagagg	aggagggagg	gtactgatta	atcgggtatct	ttctatttat	gtgcaagtgg	300
aattataata	aggtggccctc	tcctttttctc	ccctttttttt	tct		343

<210> 110

<211> 617

<212> DNA

<213> *Eucalyptus grandis*

<400> 110

ctcatccgac	cttgtgaggg	agggtggtgca	atcattcata	ttgtggatca	tgttgatcta	60
gatgctttgga	gtgttctctga	agttctcaga	ccacttttatg	aatcgtccaa	aattctttgca	120
cagaagatga	ctgtttgctgc	tttgcgccat	attagacaaa	tagcccaaga	aagttagtggg	180
gagattcagt	atggaggtag	ccgacaacct	gcagttcttga	ggacgttttag	tcagaaatgt	240
tgcaagggtt	ttaatgatgc	tgtgaatggc	tttgtggatg	acggttgggtc	tgttctaagt	300
agcgatgggg	tagaagatgc	caccattgct	gtcaactcat	ctccaaataa	atttcttgggt	360
ttccaataca	atgcaacctat	atttccaaat	tttggaaagag	gagtgctctg	tgccaaggcg	420
ttcatgcttc	ttcagaatgt	tcgcctgct	gtgctttgtac	gctttctgag	ggaaccaccg	480
tctgagtgagg	ctgaccatgg	aattgatgca	tactcaagctg	catctttgaa	aactagtctt	540
tatgccattc	catgtgtgag	acctgggtgg	ttccctagta	gccatgtcat	tttgctctct	600
gccacactg	ttgaaca					617

<210> 111

<211> 380

<212> DNA

<213> *Eucalyptus grandis*

<400> 111

gtctttcgaa	cacttttctc	accctacc	gaaggattcg	gacaaagtca	tgttgggcaa	60
acagacaggg	ctcactagaa	gccagggtgc	gaattgtgtt	ataaatgtct	gagttcgggt	120
ttggaaagcg	atgggtggagg	agatgtacac	ggagggaatc	aaggagcaag	aacagatgg	180
gggaggagca	gaggaaaaac	caagcaagag	tgaacgcgag	gactcagcat	ccaagtctct	240
tggtctccag	gacaaaggccc	ccaactccaa	tgagaacagc	accaagagct	tcaaaccaaa	300
ggagatcacc	tcgaggaaac	acgacacccc	tgccatctct	actaatctcg	cttctctcat	360
cgggggaaac	gtcccgcagca					380

<210> 112

<211> 348

<212> DNA

<213> *Eucalyptus grandis*

<400> 112

gacaaattga	tgaaacatga	atatggatgg	gtgtttaaca	ctccggttga	tgtaaagggc	60
ctcggtttgc	atgattacta	tagcatcata	aagcatccaa	tggacttggg	cagtgtagag	120
acaaggctga	accggaactg	gtataagtca	ccgaaagaat	ttgcagagga	tgtcagactg	180
acgttccgta	atgccatgac	atataacctt	gaagggcaag	atgttcatgt	catggctgag	240
atctgtgaca	agatatattga	ggatagatgg	gccattatag	agtcagatta	taatcgtgaa	300
atgcggtttg	cgtagacta	cgacatgggt	cttctacac	ctacctca		348

<210> 113

<211> 350

<212> DNA

<213> *Eucalyptus grandis*

<400> 113

ccctcatagc	gaattgggta	ttctctccca	caatatggca	atggacctgc	atatcaccct	60
atgccaaact	actaccggat	gggctacagg	atctgtgctg	gatgcaatc	agagattgggt	120
catggacggt	ttttgagttg	catgaatgct	gtttggcatc	ctgaatgttt	ctgctgccgt	180
gcttgcaccc	tgccaatttc	tgattatgag	ttttctttat	caggcaatta	tccttaccat	240
aaatcttgct	acaaggaaac	ctaccaccca	aagtgtgatg	cttgcagcta	ctttatccct	300

acaaaccttg ccggtcttat tgagtacagg gcgcacccct tttggagtca 350

<210> 114
<211> 534
<212> DNA
<213> Eucalyptus grandis

<400> 114
acatggccag aggatatttg ctcgggtcaag agcgacatgt tcgattctga aagtccgcac 60
tacactgacg ctgcccactc ttcgctctta gagcccgcg attcttctta tgccttcgaa 120
cctgaccatt cggacctatc tcaagacgaa gaagataatt tgagcaagag ccttttctgc 180
actcgcaatt acccaaaagt cgaaaactct gactacgcca tctctgctcc aaattctgtg 240
aactttggat tccattctga ggaactctgcc ttttggcctt ggtcatactg aaggcgctcc 300
tgatgcggtt cactcccttt gttttcttgt atcatatag aggggatacg ctataagtat 360
gcaataagct ccatcaatag ctgacatctg tccaaatgtg ctgagtgcgt ttctcaagga 420
agttggaacc tgtgttgatt tccttttctt taggttttgt ccttcaatgg gatcgtctgt 480
ttctatgta aactaaataa agaaaccttg tttatcaatg caaaaaaaaa aaaa 534

<210> 115
<211> 450
<212> DNA
<213> Eucalyptus grandis

<400> 115
aagaaggtaa actcgggcac agcaacagta gcaatagctt ggacaatggg aaatatgtga 60
ggtagacgac tgagcaggtt gaggcctcgc agaggctcta ccacgagtgt ccgaagccca 120
gttcaactcg tcgccaacag ctgatcaggg agtgtcccat tctctccaa attgagccca 180
agcaaatcaa ggtctggttc cagaaccgaa gatgcaggga gaagcagagg aaagaagctt 240
cccgtttgca agctgtgaac aggaagctca ctgcgatgaa caagtatttg atggaggaga 300
atgataggtt gcagaagcaa gtttctcagc tgggtgatga gaatggctat ttccgccaac 360
acaccagaaa cagcagcgtt gcaaccaaag acacaagctg tgaatcggtg gtgacgagcg 420
gtcaacacaa gttgacatct cagcatcctc

<210> 116
<211> 501
<212> DNA
<213> Eucalyptus grandis

<400> 116
ggaagaaaat atgcagcatt tgaaggacga agctgcgaac atgatgaaga agatcgagct 60
cctggaagat tcaagaagga agctccttgg tgaaggtcta ggatcatgct cgatagagga 120
actgcaacag atagaacagc agctagaacg gagtgttacc agcattctgt ctagaagaac 180
tcaggcttcc aaggagcaga ttgacaaagt taaagagaag gagaagatgt tgacagctga 240
gaatgcaatc ttaactgaga agtgtggaat caagccccc caaagagcaa atgagtgacg 300
ggatgtcca cttctcagag agagcacccc gagttcggag gtggagaccg gtctcttcac 360
cgggacacca gagaccagat cgaggcgctt gccgtttcag aattaaaaat atagccctag 420
cctctcaaag tttcaaaatg tcacaagcga gacgggcaga aaacaaccac cgaccatggc 480
cgaagaacac caccaccacc t

<210> 117
<211> 372
<212> DNA
<213> Eucalyptus grandis

<400> 117
gacaaggatc cgaagagacc cgtgagggac ccggtcttcg ccgcgcgtccc agataagttc 60
gtcgcgagca tgatgaagcg gtgcggcgct atcttgacga aggttatgaa gcacaagcac 120
gggtgggtgt tcaacacccc cgtcgacgcg gtcgggttag ggcttcacga taaccaccag 180
ataatcaaga acccatgga tctcggcacc gtgaaacatg atctcgagag gaattttctac 240
cactcgccgc aggaagtctgc ggcgcagctg aggctgacct tcaacaacgc attgacgtat 300
aacccctaagg ggcacagcgt gcatcacatg gcggagacgc tgctcgtgca gttcgaccag 360

atgttcgatc ct 372

<210> 118
<211> 378
<212> DNA
<213> *Eucalyptus grandis*

<400> 118
gtgagcctct cccgtgtcga gaagcacgctg tgcagcgcca tgaacaagct ccacgaagcc 60
gccatgaaag gcgacctcgc ggcctccaa gacctgtgtg tgcaggacc ccagatccctc 120
cacaagacca cttctctcgt ctcgcagcgc acgccccctgc acgtttcctg cctctcggggc 180
cacgctgctt tcaccaaaac cctctcacc cacaaccgg agctcgccaa ggaggccgac 240
tcccgcggct cctctgccct ccacgtggcg tgcgcgaagg gcgacgtgga gatcgtcagg 300
gcctctgtgg ccgtcgaccc ggccgggtgt ctcgggtatg atcgcgaggg gaggacgcct 360
ctgcacttgg ccgccatc 378

<210> 119
<211> 414
<212> DNA
<213> *Eucalyptus grandis*

<400> 119
cgacgacctc gacaacgaga gggcgctctc ccgccccggc ggcagcgagc agggaggacgg 60
cgacatgtgc aggaagaagc tccggctgtc gaaggaccag tccgcccgtc tcgaggagagc 120
cttcaaaag cacaacacc tcaatcctaa gcaaaagctg gcaactggcg aacagctggg 180
gctcgggccc agacaagtgg aggtctggtt ccagaacagg cgagccaggc cgaagctgaa 240
gcagacggag gtggattgag agtacctgaa gcggtgctgc gagagcctga cggaggagaa 300
ccggcggtcg cagaaggagg tgcaggagct ccggggcgctc aagctctccc cgcagtctta 360
catgcacctt ttcccttcca ccaccctac catgtgcccc ttctgtgagc gcgt 414

<210> 120
<211> 313
<212> DNA
<213> *Eucalyptus grandis*

<400> 120
gccgattacg acgagggcgg cgacgacaat ccggggagcc gccaccgggt gaccgggcag 60
ttcttccccg tggaggagga ggaggagctg gaaggagatg gcgagcgggc aggaatgggg 120
ggagccgcag tgccggcggg gttcccagg gcgcactggg tccgagtcag gttccgcccag 180
tcggatcacc atccaatcgg atcgggcaag ggctcaccga tattggaggg ttccacagccc 240
atgaagaaga tcaggaaagg gccgaggtcg cggagctccc agtatagagg ggtcactttt 300
tacaggcga ctg 313

<210> 121
<211> 415
<212> DNA
<213> *Eucalyptus grandis*

<400> 121
cgacgacctc gacaacgaga gggcgctctc ccgccccggc ggcagcgagc agggaggacgg 60
cgacatgtgc aggaagaagc tccggctgtc gaaggaccag tccgcccgtc tcgaggagagc 120
cttcaaaag cacaacacc tcaatcctaa gcaaaagctg gcaactggcg aacagctggg 180
gctcgggccc agacaagtgg aggtctggtt ccagaacagg cgagccaggc cgaagctgaa 240
gcagacggag gtggattgag agtacctgaa gcggtgctgc gagagcctga cggaggagaa 300
ccggcggtcg cagaaggagg tgcaggagct ccggggcgctc aagctctccc cgcattctta 360
catgcacctt ttcccttcca ccaccctac catgtgcccc ttctgtgagc gcgtc 415

<210> 122
<211> 385
<212> DNA
<213> *Eucalyptus grandis*

<400> 122
 ggagagccag aagctcatgg aggcgggtcca gaacggcgac gctctggccg cctgggacct 60
 cctcgaccac gacctctccc tccctcgacag gatcatcgct ctcggcgctct cgcgacacgcc 120
 cctccacgcg gctcccgatg cgggccacgc cgacctcgct cgggagctgc tgcgcccgcgc 180
 ccccgggctc gctcccgagc aggaactcccg gggcaactcg cgcgtccacc tggcgccggcg 240
 caagggccac ggcgagatcg tggcgcgagct cctgtcgccc gaccggcgcg cggcgctcggc 300
 gcggaacctc gacggggcgg cgccgatcca cgtggcgccg atcaagggcc gggctcgacgc 360
 ggtgggacgg atggtcgggg ccgctc 385

<210> 123
 <211> 282
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 123
 gtatagcggg tatttaagta gcttgaaaca agaactctcc aagaagaaga agaaaggaaa 60
 aactccctaa gaagcccgcc agaagctgct tagctgggtg gaggttacact acaaatggcc 120
 atatccatcg gagacagaaa aggtggcatt ggctgaatcc actggttttag accgaaacaa 180
 gataaaccaat tgggtcataa atcatgttat agagtgttgg gtaaaagcca tggcaaccct 240
 aatgcagaaga atatttttga tgactaaggc cattcttagg tc 282

<210> 124
 <211> 383
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 124
 gcactttcag cttcggcgatc ctgaaggcgg gcgagggagg tgatgggtgc gcggacgacg 60
 aactcggggg gacgaggcag ctgttcccgg tgagggagggt ggatgaggat atggagtggt 120
 gcggcgagtc gtcctcgctt gataaagagga gcgatgtctt cttgggttggg gcttgttaagg 180
 aaaaaggaagg tccgaggctg gcgatgccgc agcagcgagg gaagagcagg aggggacoga 240
 ggtcaaggag ctccgagtat agaggggtta ctttttatag gaggactgga agatgggagt 300
 cgcacatatg ggactgtgga aaacaagtgt atttgggtgg attcgacact gcacatgctg 360
 cagctagacc tatgatcgag ctc 383

<210> 125
 <211> 350
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 125
 ttccgaagat atgcagttca tggatgatga cggctctcat cctcaagggt ccgctttata 60
 catggatggg cactacattg gtgatggtcc ctaccgtttg ggcccgtagg ctgtcaatcc 120
 atgcaccata atccgatata taggtttgat gttcttcgag ggtcctctgg tgggtgcttc 180
 gcctttacat tatgtgtcct agtgtatgaa ttggttagtt tgcccactga tcaaatcatg 240
 ttatagatgt ttgggttaag tccatggcaa cccaatgcaa gaaatatttt tgatgactaa 300
 ggcctctctt aggtcatatc tatgtatcct cttatatgtc ttggtttttc 350

<210> 126
 <211> 539
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 126
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 aacagaagaa ggttcagtga tgaacagatc aggtcactgg agtctatctt tgaatcccgag 120
 tcgaggctag agcctcggaa gaagctcgag ctccgtaggg aattggggct gcagccccgc 180
 caggtggcca ttgtgtcca gaacaagaga gcccgatgga agtccaagca gctggagcgt 240
 gacttcgcca ttcttcgcgc caactacaac gccctctatt cccggttcga gtctctcaag 300
 aagagaagc aatccttggt cactcagatt gagaaactaa accaactcgt cagagagccg 360

caaggagagg	gccagagctg	cgggcatgat	ttggcaacga	acagcaccga	tcgcgaatcc	420
gacaatgggg	ttcccaagta	tgaagacagt	cagcctgtat	ttccggataa	actaacgcgt	480
ttgatgggaa	tcccatgtga	ggatgactac	tttggcctaa	agagagcaga	gctcctcaa	539

<210> 127
 <211> 493
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 127						
taacctcacg	gacaagctgc	ttcacaaggg	aaatgagaag	gagagttccg	agtcgtccag	60
caaatcatct	caagggctat	tccagaaccc	catgtctgat	tctgtttctg	aggacgaagt	120
gtccagagtc	cccatctcta	catggccaga	ggatatttgc	tcggtcaaga	gcgacatggt	180
cgattctgaa	agtcgcgcat	acactgacgc	tgcccactct	tcgctcttag	agccccgcga	240
ttcttctcat	gctttcgaa	ctgacatttc	ggacctatct	caagacgaag	aagataatct	300
gagcaagagc	cttttgccta	ctcgcaatta	cccaagctgc	gaaaactctg	actacgccat	360
cctgcctcca	acttcgtgta	actttggatt	ccatgctgag	gatcctgcct	tttggccttg	420
gtcatactga	agggctcctt	gatgccgttc	actccctttg	ttttcttgta	tcataatga	480
ggggatacgc	tat					493

<210> 128
 <211> 627
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 128						
ccgagaagag	gacccccaag	aagagagggg	ggaagccagg	cctcggccgc	gacacgccgc	60
tgaaccacgt	ggaagccgaa	cggcagcgcc	gggagaagct	gaaccaccgc	ttctatgcgc	120
tgcgagcggt	gggtcccgaa	gtgtccagga	tggacaaggc	gtccctgtgc	tcgcagcgccg	180
tgtcctacat	caacgagctc	aagtcgaaga	tcggcgatct	tgctgtccag	tccgagagag	240
agtcacaagag	gggtcaaacag	gaggtcacgc	acgcaaccga	caacctgagc	accaccacct	300
cgttcgacca	tagtagacca	tccggatgcg	ggggttcttt	gctcgaggtg	gaggttaaga	360
tcgtgggggt	cgacgccatg	ataagggtcc	agtcggagaa	tgcgaaactac	ccatcgccga	420
ggttgatggc	agcgatgcgg	gacctggagc	tccacatata	ccacgccagc	ctgtcgacgg	480
tgaacgacct	catgctccaa	gacgtgggtg	ttagtgttcc	ggagggggctc	aaaggggagg	540
aagatctcag	agctgcgctt	cttcggggcac	tggacaatg	acggtcggag	aaattgcccg	600
gggagagaga	gagagagtag	gtactgt				627

<210> 129
 <211> 385
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 129						
ggaagatgac	aaactagggg	gaaatagagc	atctgcgaac	gtgtgtacaat	catcttctgt	60
aaagggggag	ccttctgggt	gaactcttgt	tgatgtccct	actagtgtgc	ttaggcagtg	120
gggtgatgag	ctgaaaaata	aggtttcaga	gaaggctaag	ctatctgtat	gtatgtatca	180
tgggaccacc	aggaccaaag	atccatatga	attagctaat	tatgatgttg	ttctgacaac	240
atattctatc	gtaagcatgg	aggtaccgaa	accgcgtgg	tttaagagatg	agaaggatag	300
ctgcgaagat	gatgatgatg	cgttttttgg	taggaagaga	aagcactctg	ctaaatctga	360
gaaaagacgc	ttgaagaaga	aaatg				385

<210> 130
 <211> 345
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 130						
tttcagattg	tttatcaatt	gggtgctaga	cttcaactcc	gcagattctg	ctattgatag	60
tgacattttt	catgattttg	cagcattttg	gaatgcattc	catgctttgc	aaaccttgaa	120
agttccagcg	ttcagctttg	catggctcga	gctgggttag	cacaggagtg	tcattgccaa	180

gattctctca	gggaactctc	agaaaggttg	gccttacttc	cagcgctgc	tggttgactt	240
gtttcagtac	atggaaccat	tcttgaggaa	tgctgaactt	ggtttgcggg	ttcattttct	300
gtataaggga	acacttagag	tgctgcttgt	gctgcttcat	gattt		345

<210> 131
 <211> 766
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 131						
gccgtctgag	gagctctgt	ctctctctct	ctctctctct	ctctctctat	cttctctctc	60
cccaaaaccc	catcggaacc	aaaaacccta	acgaagatga	atagggagag	gcttatgaag	120
atggcggtgt	ctgtccgcac	tggtggaaag	ggtaccatga	gaagaaagaa	gaaggctgtt	180
cataagacca	ccacgacaga	tgataaaagg	cttcaaaaga	ccctgaagag	gattgggggtg	240
aatgcctacc	ccgcaattga	agaagtcaac	atttttaagg	atgatgtagt	tatccagttt	300
ttgaatccca	aagttcaagc	gtctattgct	gcaaatacct	gggtagttag	tggtctctct	360
cagacaagaa	agctacagga	tatcctccct	ggcatcatca	accaattagg	tcttgataac	420
ttggacaacc	tgagggaagt	ggcagagcaa	ttccagaagc	aggtgcctgg	tgccggcaact	480
ggttctgggt	ccaactggaat	gcaggatgac	gacgacgacg	aagtccccga	gcttgtacct	540
ggcgagactt	ttgaggccgc	cgctgaagag	ggtcaggcga	ctcaggtgac	tgaggcgaact	600
cagggtgactg	agggcactaa	ggtgactgag	gcaactccgg	cctcctagag	agagggattg	660
ttattgtcat	ttcaataactt	gtagtgtcat	taaaatcctt	attttctctc	atttgtctgt	720
ctttcatttg	tacttttaac	gaactgtttt	aatctcgtga	ggcttg		766

<210> 132
 <211> 162
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 132						
ggatcttgcc	aaaaaggtga	ctcctgtgag	tacgcgcacg	cggtatttga	gtcgtggctt	60
catcctgcac	agtatagaac	aagactgtgc	aaggatgaga	ctggatgtgc	tcgcaagatt	120
tgttttcttg	ctcacaagcc	cgaagaatta	aggcctgtct	at		162

<210> 133
 <211> 518
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 133						
attatatcgt	cggtgtctatt	tcccgaataa	tttgcataac	tactagctgg	gtcctgtcgt	60
aagcctttaca	ataaatctac	tatttagctga	gtattgggtg	togaataaatt	tgacgcgaagc	120
cacgaactat	tggaactcga	tctcatggct	tctctgagcg	gaacgtcttc	cgggtcaaac	180
ttgatccaga	actcgggatc	agaggagagt	ctgcaggcct	tgatggatca	gaggaagagg	240
aagaggatga	tctccaacgc	cgagtcggcg	agggcgtcgc	ggatgaggaa	gcagaggcac	300
ctggacgatc	tgatgcttgt	ggtggctcag	ctcaggaaag	acaaccagca	gctaaggagc	360
aacgtgaacg	tggtgaacca	gcattacatg	accctggaga	ccgagaactc	catcttgagg	420
gtccagatga	acgagctcac	caacaggctg	gagtccttga	aggatatact	cggatatcctg	480
gatgcgggag	atggtggcag	accaggaaat	ggtggcgg			518

<210> 134
 <211> 413
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 134						
cctcgtcctc	ccccccccc	accggagett	cgaaatcgag	cggcgccgac	gcgatgacgg	60
acggccacct	cttcaataac	atctccctcg	ggggcccgcg	cggctccaac	cctggacaga	120
taaaagatttt	ctcaggaggg	atttcatgga	ggagacaagg	agggcgcaaa	cgagtgaag	180
ttgataaatc	tgacatgtgc	ggggtagact	ggatgaaggt	gccgaggaca	aatcaattag	240
gtgtccgcac	caaagatggt	ttacattata	agttcaactg	attccgagac	cgggatgtta	300

ttagtttgac	caactttttc	caaaatacct	gcgggttaac	tccggaggag	aaacagcttt	360
ctgtgagtg	tcggaactgg	ggagaagtgg	atttgagtgg	taatatgctg	aca	413

<210> 135
 <211> 278
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 135						
agactggggc	ccatggggcc	caaaactctc	tgcaatgctt	gtgggtatccg	ttacaagaca	60
ggctgcctct	tccagagta	cgttcccagt	gcaagcccaa	catatgtccc	ttctcttaac	120
attgatatcca	atgaaatccc	ttcaagccat	ttatggcttt	ccctctttca	aaaataaate	180
ttttcaacca	ttgtcactcc	cacacgtatc	cgactcacag	taaggttgca	aaaccacgct	240
tatgttgtcc	aacctttctc	aaaagagtg	cagagtag			278

<210> 136
 <211> 237
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 136						
ccgggggtggc	aatcgatgtg	aagataatgg	gttgggatga	agtgggtcga	gtagagagcg	60
gacggaagga	tcactctgca	gcaaggttaa	tggtggctct	tcaagaattg	aactcggagt	120
tcgagcatgc	tagtgtttct	gtggtagaac	agctcatgat	ccagcaagcc	acagttgaaga	180
tggggagtc	gttgtacact	caggagcagc	tcaaggcagc	tctattggcc	gtaattct	237

<210> 137
 <211> 371
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 137						
ccaagccgcc	gatgaagaag	cagaagagca	agcccgtgc	tgcttcggag	acggccggac	60
cggcccgacg	gtgcagccac	tgccggcgtg	agaagacccc	gcagtggagg	gccggcccca	120
acggggcgaa	gacgctgtgc	aacgcgtg	gggtccggtt	caagtccggc	cggtcgtacc	180
cggagtaccg	gcccgctgtg	agccccacgt	ttcttagcga	gctgcactcg	aaccaccacc	240
gcaaggtgct	ggagatgagg	cgcaagaagg	agtcacatgac	gacgacggca	ctgggtcagc	300
ccgagcccg	tcggcccgct	gccacgcttt	tgaggcgcaag	ggtgggttct	tcctggcgcc	360
ctcgggaat	a					371

<210> 138
 <211> 947
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 138						
cagggaagac	ctgttccact	gctaattgctg	agggctcgcta	agacagtggga	tgcttatctc	60
ggcgagatcg	ccacctacag	tgaggtcagc	attgcaaaagt	tcaatgggat	tgctactatc	120
gtgcctaaag	gagcccgaaa	ggttgacgat	gatctttatc	gtgcgattga	tatctacttg	180
aagttctacc	cgaacctcga	tgaagatcat	cgtcaacctt	tcgggctctc	ttaggcccg	240
gctctctctc	gctgtggcaa	gagctgccgc	ctccggtgga	tcaattacct	gcggccggag	300
ctcaagccgg	gcaacttcac	cgaagaagag	gatgagatca	tcatcaaa	gcacagcttt	360
cttggttaaca	aatggtcgct	cattgtcggg	cgtttgccc	ggagaaccca	caacagatca	420
aagaactact	ggaacaccca	cataaggagg	aagcttttga	accgagggat	cgactcgccc	480
actcagcagg	tgatcaatga	gcccgacaa	gatcaccatg	acgagccac	cattctcttt	540
gctgctcaatt	ctaaggagat	caaagagatg	aagaacaa	cagagctcaa	tttcatgtgc	600
aacttagaag	agtcggcaga	cgtggcatcg	tcggctcgag	aaaggtgtcc	tgacctgaat	660
ctcgagctcg	gaatcagccc	tcctctcat	caactgcac	agcctgagcc	actcttgaga	720
ttcactggta	ggaaaagtga	ttgtgtctg	gagtgtaatt	tgggggtgaa	aaatagccaa	780
aattgcagat	gcagtgttgg	ggtgatcgag	agtgaaacta	gtgttgggta	tgactctctg	840
ggcttgaagg	caagtgtttt	ggattatagg	agctgaattt	tggtgaagaa	gatggataat	900

ttgtgcagcga agagatgagg cagagattgt tattagtgtga aatctgcg 947

<210> 139
<211> 509
<212> DNA
<213> *Eucalyptus grandis*

<400> 139
caggaaatcga aaaaaaacat aaaaaaaaaa aaaaaagacg cagtttttat cgcctgtcga 60
acagaaaaaa ccccccttc acaacaaga ttttccccct tcaaaaagtc aagaatcgtt 120
tccccccccc gacagaaata aaaaagaaca gaaaaaaa cgtccagatc ccatttgga 180
gctcctcggt cgcgaccctt ttggtgatcc ctctggtgac cagcaagggt cctcggtgtc 240
aatatccgca gattctgggt tatcgtttgtc ttctggatcg ggtttggtat attgggcgca 300
ttgggaggac gggaaaaat caagaatgtc cgttctgtca aaaaagcatt ctgttgagat 360
tagggagggt ttgggaatata atctggaaga cgagtttttc ttcatctcgc aaatcgttga 420
tgattatccc tacattgccg ttgacaccga gtctccctggg atggctcctc gaccggtggg 480
gaatttcaag agcagctccg agtctcatt 509

<210> 140
<211> 426
<212> DNA
<213> *Eucalyptus grandis*

<400> 140
ccatgagaag aaagaagaag gctgttcata agaccaccac gacagatgat aaaaggcttc 60
aaagaccctt gaagaggatt ggggtgaatg ccattccccg aattgaagaa gtcaacattt 120
ttaaggatga tgtagttatc cagtttttga atccaaagt tcaagcgtct attgctgcaa 180
atacctgggt agttagtggg ttctctcaga ccaagaagct acaggatatt ctccctggca 240
tcatcaacca attaggtcct gataaacttg acaactgggt tagttagtgg ttctcctcag 300
accaagaagc tacaggatatt cctccctggc atcatcaacc aattaggttc tgataaactg 360
gacaacctga ggaagtggc agagcaattc cagaagcagg tgctcggtgc agccactggt 420
tctggg 426

<210> 141
<211> 310
<212> DNA
<213> *Eucalyptus grandis*

<400> 141
tactgggaaa ctctcatggt ctccaatct gaagagcttc ttcacaacag ctgcgtcagc 60
gaggtgattt ccagattcaa tgggtccgag tccgcgagc cggcgcgct gcggttagca 120
tctaaaagca ttgacctgaa aagaataagg aggaagaagc tcaatgaaag gctcttcgca 180
ctcagagccc ttgatcccaa gataagcaag atggataagg ctctgatatt gaagatgct 240
attgattaca tccaagactt gcgtgaacaa gaaggaagat ccgagccgag atccgagagc 300
tcgaatctgt 310

<210> 142
<211> 622
<212> DNA
<213> *Eucalyptus grandis*

<400> 142
ccgggggtggc aatcgatgtg aagataatgg gttgggatgc agtggttcga gttagagagcg 60
gccggaaggga tcatctcgtg gcaagggttaa tgggtgctct tcaagaattg aacttgaggt 120
tgagcatgct tagtgtttct gtggtgaacg agctcatgat ccagcaagcc acagtttaaga 180
tggggagtcg gttgtacact caggagcagc tcaaggcagc tctattggcc gtaattcgag 240
gatctttgaa ggaatttcgt caatgcaagt tggcatcgac tagacaattg aattgaagtt 300
ttctcattga aagcaagaac ctgcccataa ttttcaggtt cggggtgggt cgaactcttt 360
gaacaatggg ctltgtttag ttgtgtgggt tgcgtctgga gattgaaccc ctgattcgat 420
agttgaagta aatacctagt tctagcagat agtaattttt ttccacagtt gatctctcgc 480
ctgtcttcga tgtaaataga tgctccaaat ttgaaactga tggggcgctt tecttatcct 540

ttgttagcct	gttctgcgct	ttgtgggt	caaccaagat	catgtctctt	gtacaccaag	600
catctctgtaa	tcaatgcgca	ag				622

<210> 143
 <211> 369
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 143						
cggaatttat	agttgtctta	acttagatgc	tagcaatggc	ggaagttctg	caattgatcc	60
atctatctca	agtgcatttt	tagacgattt	ttgcacaata	aaggatggac	cttttcggaa	120
tctttcagat	tgtttgggtg	gcaacttcag	ttcaagccaa	gatgttcagt	ctcagattac	180
ttctgcaagt	cttcgagatt	ctcaggcttt	ctcaagacaa	gacttccctg	ataattcagg	240
cggtagcatct	tcgagcaatg	ttgatattga	tgagagtagc	attttgaaaa	acagcacatg	300
gcaacagcaa	gtagccccac	ctatgcgcac	ctatactaa	gttcaaaagg	caggatcagt	360
cgaaggtgc						369

<210> 144
 <211> 768
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 144						
aagaattcga	cacagtcac	tttggaaatag	cagtgtcgag	aaacagagtg	ttgctcccta	60
ttgtgactggc	taacatgtaa	agcaggagat	tgaaggcagc	tccagcccag	gctgtttcat	120
aaagtatacc	agaagtctct	gtcgtttcct	ggtacagggg	atagatccta	gcaattctcg	180
gtacatatgt	gccataaatg	acgaacttca	gtgactcctt	cgacattaaa	ggaacctggt	240
acgtcatcgc	tgctgcggag	gtacacattc	gcgagaaacc	atctctcgtt	ggtttccaat	300
tcgaagttcg	tcgcgtcgcc	ctctcgatct	ttgaggaaag	cgaggacagg	gttgcgctct	360
gtttgcgcca	tggggctcttc	tgcttctctc	cagagggccc	acaaccttca	agacaaagtt	420
ggccctgtct	ccgttagtga	tgaagagtgg	aagaaacgcc	tgactccgga	gcagttatcc	480
gttgcgtcgc	aaaaggcgac	tgagagggct	ttcaactggg	agtattggaa	caccaagacc	540
cccggaactt	atcattcgct	ttgctgtgac	acacctctat	ttgaatcaaa	tacaaagttc	600
gatagtggaa	tcgggtggcc	atcttactat	cagcccatag	ggaacaatgt	caaatcaaaa	660
ttggtatctc	cgatcatttt	catgccacgc	caggaaagtc	tgtgtgctgc	ttgcgacgcg	720
catcttggtc	acatctttga	tgatgggcca	ccccaaactg	gtaaaagc		768

<210> 145
 <211> 546
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 145						
gaaagaagaa	gggttgggtga	tagaggagat	agaataagaa	gggatggcgc	agcttatggt	60
ggacaagtgc	ggggagggct	tgctggtggc	ggtggaggca	cagaaggcgc	tgccggcgcc	120
gttctctgag	aagacgtacc	agctggtgga	tgacctctcc	accgaccaca	tcgtctcgtg	180
gggagacgac	gactccacct	tcgtcgtgtg	gcgtcccccc	gagttcgccc	gcgacctcct	240
tcgaaactac	tttaagcaca	ataacttctc	cagcttcgtc	cgccagctca	acacctatgg	300
tttttaggaag	atagtaccag	acaggtggga	attcgccaac	gagttcttca	ggaagggggg	360
gaagcattta	ctctgcgaga	ttcacccgcg	caagaccgac	caaccacaac	tcaccaccca	420
ccaccgcgac	tcgcctctcc	cgcttagcgg	ccccactccg	gccttcttcc	ctttcccaag	480
cgccctcagc	atctctccct	ccgactccga	cgaccagcat	tcctcccact	ggtgcgactc	540
gcgcgc						546

<210> 146
 <211> 640
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 146						
cgcgcccgcg	tcgacgaaga	acacctcaga	atcaaacacca	ctcccccaatt	tctctctcta	60

agatccacaca	cccaaccgcc	accctcaate	tctctctttc	tctctcttct	tcagtgtctg	120
catgtgcttt	ggagggccct	agctccccc	ccgctccctc	cgccccgttc	caatctcatga	180
aggactctct	ccccgccgcc	gcgcgcgcgc	cgctctcttc	ctctctctcc	gcctaagacc	240
ctccccctgc	cgagccctgg	gccaaagcga	agcgctccaa	gcgccccac	aaccgccct	300
ccgaggacga	gtacctcgcc	ctctgcctca	tcagtctcgc	ccgcggcgcc	gccggccgga	360
ccctcccccc	gccgctctcc	ccgcgggtct	cttccgaggg	ggccaagggt	gcctacaggt	420
gcccgctctg	gcacaagggc	ttccctctcc	accaggccct	ggcgggccac	aaggccagcc	480
accgcaagca	cgctctctcc	gcgcggcgcc	ccgcgggggg	tgcgaccag	ccgaccacct	540
cgagcacctc	cgcggcgagc	accctctccg	gcgtctccgg	gaaggtccac	gagtgctcga	600
tctgcccaca	gagctctccc	accggccagg	cgctcggcgg			640

<210> 147

<211> 236

<212> DNA

<213> *Eucalyptus grandis*

<400> 147

atcagcagca	gcagatggcc	gaggcaagag	acgctcactc	ttcttgagat	cagatctcgc	60
ctcgatccca	agttcaagga	ggccaatcag	aaaggaccct	tgtgggacga	agttctccag	120
ataatgtctg	aggaacatgg	gtacaataga	agcggaagaa	agtgacagaa	gaagtttgaa	180
aacctgtaca	agtactacaa	gacaactaag	gaaggcaagg	ctggaaggca	ggatgg	236

<210> 148

<211> 520

<212> DNA

<213> *Eucalyptus grandis*

<400> 148

ccggagccccc	agaggaaggt	cgacacttgt	catcgcccag	cgcgactcgc	agattcggtt	60
cgatctcgga	ggggaaatcc	aacttgccgc	aaatagcaat	cgagcttgcc	agaatgggtc	120
ctcaaatgaa	cttcggaaac	ttggccgatg	tgccagcagc	cgaaagaagc	accggagggc	180
aaccaggaaat	ttccctatta	tctcgacaat	cctcagataa	ttccttgact	ttcaatgagt	240
ttcagaacac	atggagtgga	ctttctaagg	atatggatcc	catcaacatg	gatgagttcc	300
tgaagaacat	atggacagct	gaggagagcc	aactacagct	acaagacatc	gcgcctctctg	360
gtaatggagg	ggaaggaggt	ggtcaagtag	ggaatttgct	gagacagggg	tcattgactc	420
tgtcgcggag	tattagtcaa	aaaacagttg	atgaagtgtg	gagagaatta	ttcaaagaga	480
cggaggatgt	gaaagaaggg	agtagagaag	gaggtgacat			520

<210> 149

<211> 148

<212> DNA

<213> *Eucalyptus grandis*

<400> 149

gacttcgagc	ggaaccgggc	ggaggggggc	gactcggccc	gggtcgcgga	gctgatgata	60
tcgtccggcc	tactgtgcaa	cgacgcgggc	atctgggtca	ccttccacag	gcctacgac	120
ttcgggtacc	tggtcaagat	cttgaccc				148

<210> 150

<211> 443

<212> DNA

<213> *Eucalyptus grandis*

<400> 150

cacaacaccc	ccatatcagt	aaacacttct	cgtgtctcca	gccagcttct	gtctcatata	60
aaacatagcc	ccactctact	cattatccgc	ttcgctctca	ctcaactgct	atcgcgctat	120
cccagcgacg	acgtctctcc	atgaacttct	ccgacaagga	agtgacagtc	gcgtccgacc	180
accgcaagaa	gcccgccggg	agaaagaagt	tccgggagac	ccgccacccc	gtgtaccgag	240
gggtgcgtct	cgcgactctc	ggcaagtggg	tctgcgaggt	tcgcgagccc	aaaaagaagt	300
cgaggatctg	gctcggcacc	ttccctactg	tggagatggc	agcgagggcg	catgactgtg	360
cagcgcctgc	gctgagaggg	cagtctgcct	gcctcaactt	cgcagactct	gcgtggcgccg	420

tgcccaagcc ggcacgacg gat

443

<210> 151
 <211> 341
 <212> DNA
 <213> Eucalyptus grandis

<400> 151
 ggcacgacga gtaggacttc gagtcgcatc tctgggggtga ctcttcagga ggctccgcga 60
 actctcagcc aggttctctga gattccacca gctttggggg cctcagcaaa tgatccctca 120
 tctgcgctat ctgaactaaa ggctccgctca cagggtactg ctaaggctcac tactaaccag 180
 ttccacagata tgggtatgct cgcaggagca caggagctct aagcagctctc cgttaactcag 240
 gcagataccg ttatgactcg gatctctcaa acacaagaca tgggtgctgga ggatattgct 300
 aatatatcca gagatgacta catgggagca gatctgcata a 341

<210> 152
 <211> 603
 <212> DNA
 <213> Eucalyptus grandis

<400> 152
 gaaaagcgta cgcgaggagg cagcatgcgt ggctcaccgg agctaagttag gttgatagca 60
 agactttttc gagagctatt cttgcaaaaga gtgctcgatc tcagaccgtg gtttgcaccc 120
 ctcttctaga cggcgtagtg gaatttggca ccacggaaag gggtcagaag gacatttccac 180
 togtcaatca tgtcaaaacc ttcttcggtg accaccaacc cctcaccaca cggaaaccoc 240
 ccttttcgga acactcgacc tccaaccccg ccgcacacct gtcggccgac caccgcttcc 300
 actccccgcc cgtccctccc tacgccccgg ccgatccacc cgtcgagcc aaccaagggg 360
 atgaggagga agaggagcac gacgacgacg aggaggaggg agagtccgac tccgaggccg 420
 agaccggccg gcagggggcg cggcgggcag cgcagaaccc tcacggcgca ggcccccga 480
 acaacggcga gccacgtgag ttcgagatgt ctgaggacat ccggctcgcc tcgccagacg 540
 acgggtcaaa caacctggac tcggacttcc ccatgctgac cataaactcg acggcccgcg 600
 atc 603

<210> 153
 <211> 984
 <212> DNA
 <213> Eucalyptus grandis

<400> 153
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 atttgagact cgaggacgag ggccagcaga ggatgaggaa acgggtgctg gacaagtgtc 120
 acaccgtctt tgggtgggtg gatgaggaca attatgctct cggcttggac cgggtgacgg 180
 acatggagat gttcttctct gcgtccatgt acttctgtt tccctcgga gaagggggtc 240
 caggcaaatg ttttgcctcg gagaagcatg tatggctgac agatgcactc aagtcgtctt 300
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 aagcttcacg caagggaag cagg 984

<210> 154
 <211> 1144
 <212> DNA
 <213> Eucalyptus grandis

<400> 157

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gtgacagtgc	aatttaaa	ttagagcaaa	acataaaaa	agaagagagc	tggttcaatg	180
gctactggcg	tagaaggcaa	tgaaggtgtc	ccagcaaac	tgagaaagca	gcttgcgtgtg	240
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<210> 158

<211> 863

<212> DNA

<213> *Eucalyptus grandis*

<400> 158

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cgatccaccg	tctctgacgc	tcgactttgc	tgaagcgtcg	tctctctcgt	cgccgctgtc	180
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gtacggcgga	gaggacgacg	ggaatctgga	tgcatatcgt	tcgttatgga	actattccat	780
gtagtcatct	ctcaattcca	gttgactctt	ttgtggttag	ggacgactcg	gatgccgact	840
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<210> 159

<211> 936

<212> DNA

<213> *Eucalyptus grandis*

<400> 159

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aaggaaaggc	ggagaaggtc	tcaagagggg	agacatgttc	agcttgatcc	caacagtcc	180
attctttgct	tcttccctcc	tgaccagatc	cttcaccagc	tgatatctga	atgagctgag	240
gagagattcat	ttctgtttca	ctgtctactt	gaatttggat	cactttgtaa	atttgcgtgaa	300
ttgatgtcct	ataagaatcc	agaacttgcc	aaagaaaaat	ttcgatcaag	gttcgagcct	360
tcgatgcctc	catgtcgggg	tgactttacc	acccatgggtg	agcctgaatg	aaacagacat	420
tcgcgaatct	ttaccacaaa	atagtggttt	gaaagcggaa	ttccacacca	tgctccatca	480
tcaagcaaa	catcttaggtc	ttcaactaca	agaacaggaa	tcgtctcaaa	ctcaatcgcc	540
tgccaattct	tgccatgaag	tgagcgtcgt	gggtggggcc	aaactctcaag	atcaaaagcat	600
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atacagacca	caggctatta	ttcaatccca	ggtaggatct	caaatgttcg	ggatgggacc	840
tgacgtgtgt	ccattgccac	ttaaccttgc	agaccattgga	ccaatctacg	tcaatgcaaa	900
acaatttcca	cggaattcct	cgaggagggc	agtcac			936

<210> 160

<211> 281

<212> DNA

<213> *Eucalyptus grandis*

<400> 160

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tgaatggcat	gtattgtctt	tctcgcccca	tgaggattgg	gcccgtctgt	aacaaaaagc	120

ctattgctac	ccagcaatat	cagagtgcat	cttaccagaa	cagtcagga	aaccaagggg	180
agaatgatcc	aaataataca	actatatattg	tggggggtct	ggatccaagt	gtatcagatg	240
accttttgag	gcaagtatcc	agtcacatatg	gagagttgca	t		281

<210> 161
 <211> 291
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 161						
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aagaggacca	aggaaggccg	tgctgggtcg	caagacggca	agacctacaa	gtttcttctcc	120
gagctcgaag	ccctccacaa	cacgcgcgcc	ggggccaccg	tgggaatata	aagcagcttc	180
aagtggtggg	ggtgctcgct	ctggacatcg	agccctgggc	ggtctctcgg	taccgccagt	240
ttcgatcggg	atatcggttc	ccaaccccg	cccaatctcc	actgtccgcg	g	291

<210> 162
 <211> 743
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 162						
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gcaggggggt	tagagagtga	gaacggcgga	aatgggagat	ggcctaggca	ggagactctc	360
acgctcctcg	agatcaggtc	gaggtctcg	tctaggttta	aggaggccaa	ccaaaagggt	420
cctcttttggg	acgaagtctt	atgggattatg	tgggaagaac	atgggtatca	acggagcggc	480
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aagcggggtg	ggcaagacgc	taagcactac	aggttctctt	gtcagctcga	agctctctac	600
ggagagaaac	ccaattcgaa	ttccatcctc	caagctccat	ctcttcacaa	ctcactccac	660
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catcaactgc	agagaccgtg	cga				743

<210> 163
 <211> 394
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 163						
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ttcggcacga	gcgagctctga	atggaacgcg	gcgatccgaa	cgttctcgcc	gtcgccaggc	120
tgaggaggga	agactgcgaa	cgaaccaagc	acgactccgc	gttcgccact	tggaaggtgc	180
tcgtaggacc	tactgatttg	gaagattatt	cattggggaa	ggaaggtgct	gccaggatcc	240
gggttcataa	cctcccgaaa	agccgggggc	cggggatata	tgagctcggc	gtagccgctt	300
ctcatgccaa	attgggtcgt	gagatcgcca	agctcgaccc	gcgatataata	gtcgtgtgtt	360
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<210> 164
 <211> 1017
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 164						
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tcctcagctc	ctctctcaac	actgggtttt	gagatgatcc	gtgtgctcgg	cgcggttgat	180
tattatgtct	tattctgact	tgtgaaacct	gctgtttggc	gtgggcgttt	gggtgaccgc	240
gtatatgtcg	gctgcggttc	tcgagtcgct	ccgggtcttc	cataactctct	gttcgttttg	300

atttcgatag	ctgttttcga	aggctaagat	gggctacgca	cagctgggtca	tcggccctgc	360
cggcagtgcc	aagtcgactt	attgtctcgag	tttgtatcaa	catgtgtgaag	ctattggggcg	420
gacaatacac	attgttaacc	tagatcctgc	agcagagaac	tttgactatc	ctgtggccat	480
ggatattcaga	gaactcattt	cattggatga	tgttatggag	gaacttggac	tagggccaaa	540
tgtgtggcctc	atgtactctc	tgggaacctc	tgaggaaaac	ctggatgatt	ggctcaactga	600
ggagctggat	aactatttgg	acgatgatta	cttagtattc	gactgccacg	gccagataga	660
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caatgtctgt	ggggtatact	tgcttgattc	acagttcatc	acagatgtga	ccaaatattat	780
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cctgtcaaaa	atggaccctg	tgaaaaacaa	gagagatatt	gatgattact	tgaatccgga	900
acctcgagtg	ttgtgtcgag	agttgaacca	aacaatggct	cctaagtttg	agaagctcaa	960
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<210> 165

<211> 376

<212> DNA

<213> *Eucalyptus grandis*

<400> 165

tatccaacca	ttatttatcg	tcctacagt	tttatggcca	aaatcagcgc	cgtggagcgc	60
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aaatattttt	atgcacgcga	caggccgatg	tatatgcagg	aatatcttta	tccaatcaga	180
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cattaaccca	gcatecgacc	gggtgcaatt	aaattacggt	gtaagtcgaa	gaactgggta	300
agatcgtggt	gaatatgtcc	gccaggcgca	ttttccagat	agcagatcgag	ataatcccga	360
tacataggat	gtgcac					376

<210> 166

<211> 689

<212> DNA

<213> *Eucalyptus grandis*

<400> 166

aaatagaaga	agaagaagaa	gaagaagagg	atgatgatga	cgattgatga	ggtaagagac	60
gtcactcgtc	aatggctcat	cgctgaagct	tctacacttt	aatgcaagca	tcgatcgtct	120
cggcgacgtg	ctctgcttcc	tcttcactgc	tggctcagttc	atatgcattc	acgcgtagtt	180
gtcttcaagc	gacgcataca	ctgattgaag	cgtcctcata	ggcttgtgag	atgatccaaag	240
acctttcact	gcttgtgata	ctctttataa	aggacgaggg	atggctcttga	tgaatcagcc	300
catctagaga	ggcttccacc	atatcacagt	ttggacttgt	gccaatgcca	aaaggttcaa	360
gcataaagat	gggagttcca	ctgcaacatt	ctagtgggat	caacaattg	aatgttcatt	420
ttcaagagcg	ggacttgtgt	tctactcaat	caaccagtca	atcattcagt	gaagtgccta	480
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aaactgaagg	gcaatcagtg	agaggacaag	cttgtcaatg	caaaatcagc	cttgtcagg	600
atattagtcct	ccaaccttta	gaggtgtgca	tcccaactcca	ctatgctgaa	ccatccttgg	660
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<210> 167

<211> 1566

<212> DNA

<213> *Eucalyptus grandis*

<400> 167

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ccgtgatgcc	aagtcctgct	tagagaggtg	gaagaactac	ctgaaaccag	gtataaagaa	480
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caaatggaag aaaattgtctg ctgagatccc gggccgtacg gctaagagat tgggggaagtg 600
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aattgacgag gggaaatacg atcatatatt agaaaacttc gccgagaagc tagtgaaggga 720
gcgatcgacc ccagcaattc tcatggccac agcaaatggt ggccttcattc acaccgatctc 780
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tctgcttatt agaattccaa gactcccttt tctaccctaa caaacaccta cctttacgta 1500
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ggaat 1566

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<210> 168

<211> 381

<212> DNA

<213> *Eucalyptus grandis*

<400> 168

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gtctaaacaa gatcagggca agaaagaacc atttaattag ggagcatatt gagcgctaa 120
aagcagagga gcggaaacta ctggaagaaa agagaagcct acttcaagag attgaatgag 180
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tggaatttga gaccgagttg ttataggggc caccgaaaag atgaaccgct cagttgcccc 300
ttctgcgaat gctcaaaata atgaccatag caacggaaaac gctttctctg ctgctctttt 360
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<210> 169

<211> 331

<212> DNA

<213> *Eucalyptus grandis*

<400> 169

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gtttatggat gaagacgagc tcttgaacat gccgaaactg ctggacgaca tggcggaagg 120
aatgctggtg agcccaacga ggaactcaat ggctctcagag aacgactcgc cggaggaactc 180
agatggttga gagagcctgt ggagttatcc ctaattttag aaggtgagat gatcagggct 240
tatcaattac agtagtcctc attgtagaca tatacgaata cgaatcatcat tgtatatgat 300
caggatttgc tcatgatggt tgatgcgac c 331

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<210> 170

<211> 950

<212> DNA

<213> *Eucalyptus grandis*

<400> 170

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ccttgggtgc tgatgtgtgg aggcgccatc atttccgact tctgcagga gcggctcgac 120
cgcgcgcgcg ccgggagctg ccgccccgag aggaagctga cccctcaaga gctctggtcc 180
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gccgccgaga tcagggaacc ccacaagggc gtccgcgtct ggctcggcac ctccaagacc 480
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aagctcaact	tctccggccc	cccgccccc	gccagccgt	cagctaagaa	gaggtcgctg	600
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gccagcttgg	aatctttcct	ggagctggag	ccaaccgagg	agccgctcga	gccgggcaac	720
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<210> 171
 <211> 376
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 171						
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aaacaccacg	aagctctatc	gtggagttag	gcagcggcat	tggggcaagt	gggttcgaga	180
gattcgcttg	ccgaggaacc	gaacccgact	ctggctcgga	accttcgaca	cagccgagga	240
tgcagccctg	gctatagcga	gccaggcgct	caagctacga	ggggagaagt	ccaggctcaa	300
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atcttcgtca	cccccc					376

<210> 172
 <211> 427
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 172						
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<210> 173
 <211> 607
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 173						
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gttgctctgg	ccggcggtt	tcaccgagag	aaaggaaatc	ttggatgatt	ctgacaggca	600
tatccac						607

<210> 174
 <211> 719
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 174

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gcttgggggg	ggccgcgcga	aatctagggc	tccgctccgc	cgctccctcc	cgtcgtccgc	120
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aaggccctca	aaacgggcat	ggtgctccca	ctattattac	aatgcgtgat	gatggccctt	540
cacaacctcc	ccagctagag	cttgttggtc	acacaatcgc	atgtgcactc	aatccctatc	600
aagatccata	ttatgggggg	ttgatggcac	aatatgggca	tcagtcaatg	gcttatccct	660
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<210> 175

<211> 570

<212> DNA

<213> *Eucalyptus grandis*

<400> 175

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tcagtggcag	atgttggggc	tggagggtga	gatgctgttg	ttacatttga	gggaattgcc	180
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aagcttaacc	aaaccacatc	atttggtatc	atcactcttg	atccaccaat	tcgcaaaagg	360
caaaacttgg	atccgcacat	tgtgatgcag	tttgaaccgc	actatgtggt	tcaaaagcac	420
ttgtctatga	atgatattgt	atttaacacc	aagtacaagg	acaagctgga	accatcttat	480
aagggaactc	ttcatgaagt	gttcaccacc	atcttgcggg	gtttatccgg	tgccaaagtc	540
acgaaaccag	gaaaattccg	tagttctcaa				570

<210> 176

<211> 754

<212> DNA

<213> *Eucalyptus grandis*

<400> 176

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aaagccatgg	aaaacgaaca	gagaattcac	attgtcgatt	tccagattac	acagggcgagc	360
cagtggggtc	ctttcatcca	ggccctcgca	cagaggcctg	gtggcccccct	ctctccctcg	420
atcactggca	tcgaagattc	tgaattcagt	catgctcggt	ggggcggaat	ggagatttga	480
gggcagaagc	tttcggaagt	cgcagagtc	tgtaacgtgc	cgttcagatt	ccatgatgca	540
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gcagtgaaat	gcctctacat	attgcacac	ataccgatg	agagtgtgag	cactcagaat	660
caccgagacc	gggtgttgag	actgatcaag	agtttgtcgc	cgagagtggt	gacctcgtg	720
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<210> 177

<211> 525

<212> DNA

<213> *Eucalyptus grandis*

<400> 177

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gaagcttctg	agaaggaagc	ttcaagaaga	gaacacccaa	tagttgggtt		180
gatttgaagg	ttaaacacac	tgtgtatgta	actgggttgc	ctgaggaagt	cactatggag	240
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cgcccttggtg	gcaagggtacc	gatgtcgggt	agccaagcta	agtttgagca	gaaagggtgat	480
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<210> 178

<211> 978

<212> DNA

<213> *Eucalyptus grandis*

<400> 178

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gatgttccac	ccatggcttc	ttaacttgat	ccagatgaac	catggagaaa	caaaatcgaa	180
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tccaaaagca	ggtcttcaga	tcatacaagg	ggcagcatgt	cagagcaaga	cgaagattca	900
aataacgtgg	caacagacct	tgaacttaag	atgctcggaa	catcatcaca	tcaggacttg	960
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<210> 179

<211> 566

<212> DNA

<213> *Eucalyptus grandis*

<400> 179

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aatgtatcaa	agatggataa	ggcttccactg	ctccaagatg	cggagtctta	tatcaggagg	240
cttaacatga	acctacaagc	tgacagatct	gataaggagg	atttgaaaga	gcagttggat	300
gaactaaaga	agcgatcatc	ggataaagaa	tgatccccgg	tggaatcaaga	tcgcaagatg	360
gcaaaacctc	cgggaagtag	gtccactggg	gtggcaatcg	atgtgaagat	aatggggttg	420
gatgcagtag	ttcgatgaga	gagcggccgg	aaggatcatc	ctgcagcaag	gttaatgggtg	480
gctcttcaag	aattgaactt	ggagttgcag	catgctagtg	ttctgtgtgt	gaacgagctc	540
atgatccagc	aagccacagt	taagat				566

<210> 180

<211> 521

<212> DNA

<213> *Eucalyptus grandis*

<400> 180

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gagagctcca	cgtctcctct	aatccgacga	tcgacgttcc	tccctggccc	atccggagcg	120
atccgacgga	cgacgcgctg	cctcactctc	cgtactcccc	ttcacgctcc	aatgctggct	180
acggcgccgg	ctgcgaactc	cttccctccg	ccgcggcccc	cgcccaactc	caggacgtca	240
tgggcgccgt	ccggcggttc	ctgccgtcga	accgccccga	cacggaccgc	gaccggcata	300
tgacgtcttc	ccggcgagcg	gacttcccc	tggaagctca	ctcctgcgac	aacttcgcga	360
tgtacgagtt	caaggtgagg	cgttgccgac	ggggcgccgc	gcacgactcg	acggagtgcc	420
cgtacgccca	tcccgccgag	aaggcccgcc	ggcgggaccc	gcgggaagac	cactactccg	480
gcaccgcgtg	cccgaggttc	cgggaaggga	gctgcgcgaa	g		521

<210> 181
 <211> 449
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 181
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 ccctggggcgcg gcaacaagcgt tgcacactacg atggcgcgcc cagcggtctcc gccaacacggc 180
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 tgtcgggcga cgcagcaggtg gagagccccc acccctcgaa gaagcccgcg tctctgagcg 360
 ccctgaagat caagctctct ccagaacagt gaaatctttg cctgtgcttt taggattagc 420
 gcttgtaaat tgatttagct agggctttt 449

<210> 182
 <211> 610
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 182
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 ggccgcgcgt ttccgtttct attgcaattc tcaagataga tccatggcga tccagcagta 180
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 cctctctcat ggccgtggcc aaagctccaa agagctctgat ctgcaagaca aggcactcca 480
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 cgcaattcgc 610

<210> 183
 <211> 767
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 183
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 gccaggccca attgcttgat gctcctctcc cgagttggcg agagcaccca ctccggctcg 180
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 caccagtgct cgatatcgcg cctcgatttc ccgattggcc aagccctcgg cggctacatg 420
 agggagcaca gggcgcccat gctggaagc ttggcagcag cagccgcgaa gcctgtgcca 480
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 actgggttct gcattgatat taatttgttt ccaaaaaaaa aaaaaa 767

<210> 184
 <211> 469
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 184
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gggcgcagag	gttggggaat	tcggggtgcg	atagggccgc	gcaggccgag	atcttcgggt	180
tcgcagaccat	cgcgtgcctc	cctgttttga	acgggtgtgt	cgaactgggt	tccaccgagc	240
cgatctacca	gagctccgat	ctgatttagcg	gaattagggg	gctgttcaat	ttccatgaat	300
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tctgcgatcc	gccagtcacg	atggagatta	acgatcgtcc	tatgacattt	cagatagaga	420
accaccgctc	gagcagctct	accgaaagcc	ccagcgcgat	ctgcgcgat		469

<210> 185

<211> 533

<212> DNA

<213> *Eucalyptus grandis*

<400> 185

gccttggcac	gcaaatccca	tcgggaatcc	atatgccttc	tcgcaatctt	agttccatat	60
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<210> 186

<211> 413

<212> DNA

<213> *Eucalyptus grandis*

<400> 186

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gaactacctg	aggcctgaca	tcaaaagagg	caacatatct	ccgatgagg	aagagctcat	360
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<210> 187

<211> 574

<212> DNA

<213> *Eucalyptus grandis*

<400> 187

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<210> 188

<211> 988

<212> DNA

<213> *Eucalyptus grandis*

<400> 188

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<210> 189

<211> 536

<212> DNA

<213> *Eucalyptus grandis*

<400> 189

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<210> 190

<211> 2444

<212> DNA

<213> *Eucalyptus grandis*

<400> 190

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ttgctgctga atataataaa atgttgtctg atcaagtgat tattctacta gactgtccta 2400
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<210> 191

<211> 473

<212> DNA

<213> *Eucalyptus grandis*

<400> 191

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cagcaagcaa aagaggaac cagaaaaaag cagacacctc ggtttcacgt tctctactac 60
agaattccgg agatggtaga gagagacaga gaggacacgg aggtcgaaag cctggccctg 120
gccaaactgt tgatgctcct ctcccagatc ggaacagaga ccgactcgcc atggctgaac 180
cacaatcccg ggcctacgga cgggtagttc cgttgcaaga cgtgcaaccc cgagtttcca 240
tctctccagg cactcgagg gcaacagacc agcccaagca agccgaagac gtcggcgcat 300
ctcttcacac tagggcgctc cgcggattcc tcaccggcca agccgaagac gcacgagtcg 360
gctctatgct gctctgagtg cccgcttggc cgcgtcacat ctaggggacac 420
agggccgcca tggcggagag ctggcgagc gccgaaaagc ctgtgccggt gtt 473

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<210> 192

<211> 468

<212> DNA

<213> *Eucalyptus grandis*

<400> 192

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caaaaagatt acggttgatg tgcggtaaag aaatggtgat ggaattttca aatgacgacc 60
gcatctctaa tgaagagatt ggtggccga aggatgcact tgatgatgga actcagccta 120
ataacaagag gaagcgcggt agagcaccaa agagggctat gaaggctgaa agggaaaagt 180
taaaagctga tcatctgaat gagcttttgc acaaactggg tagtcttctt gaattgagtg 240
agccgaacaa cggaaggacc tctataataa atgagactat ccggctttta aaggatatga 300
ttcttcagat tcaaatgtcta agaaaggaga acacgacttt gtgtgccgaa tctcattatg 360
ttgcagcaga aactaatgag ctgaaagacg agaattttgc actcgaagct caaatcaaga 420
atgtacaaag ggaattagaa gacaagttag gccattctaa gcccgacc 468

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<210> 193

<211> 968

<212> DNA

<213> *Eucalyptus grandis*

<400> 193

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gatctacatg gcaatgaatg gcaatttcga catatttttc gagggcaacc tagacgccac 120
ctactcacta ctggatggag tgcctttgtg agtccaaga agtgatagc tgggtatgcc 180
tttatatttt ttgaggggtga agatggagaa ttgcgcgtcg gtgttaggag attaatgaga 240

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cagcaaaagta	acatgccatc	ctctgttata	tctagtccaa	gcattgcattc	tgggggtctg	300
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acaagttagt	cagagttcat	tgtgagtcct	aataaatacc	ttgaagcacg	ggccacacaag	420
ctatccattg	gaatgaggtt	taaaatgaaa	tttgaggggt	aagaagtttc	agaaagaaagg	480
ttcagcgcca	caatcattgg	tgtaggagac	agcatgtcat	ctggatggac	taattctgaa	540
tggagatcct	taaaaggtcca	atggggcgaa	ccttcatcaa	tcatgcgtcc	cgacagaggtt	600
tcatctatgg	aattggagcc	actgtctctt	actgctcctt	ctaattccca	acaggtacag	660
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aatggaaatg	gttcaccagc	tgcatattct	ggctacacag	tcaactggcc	tagtcatatg	900
gaaactatta	ctgatccatg	tacaccagtc	aatgggaaag	aatctagtga	aaagagagag	960
agcgggtgg						968

<210> 194

<211> 345

<212> DNA

<213> *Eucalyptus grandis*

<400> 194

cggcgccctg	cagctttccc	ctccgtgtcg	acacgacgac	gactccgcgc	ccgctccccc	60
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agaaatctga	agagagggga	ctgaaattag	gttattgaga	aggattcttc	ccgtgaccaa	180
tcttttggag	aaagatggct	tctcaattta	atttcaaaag	cataaccgat	gcattcgcaag	240
ctgaaggagt	agctgggaaa	tcacacggaa	atcactcttt	aactcggcag	ccatcaatat	300
atgctttgac	ttttgatgat	tttcaaaaac	catgggggtg	gcttg		345

<210> 195

<211> 456

<212> DNA

<213> *Eucalyptus grandis*

<400> 195

gagacttccc	ctagctcacc	ttcactcacc	accaccacgc	ccccccgcgc	cgccgcgcgc	60
gcgcgcgcgc	caaccaccctc	atcctcctcc	tattctctcg	ccgtggcggt	cgccgcgcgc	120
acagacaaca	cctccctctc	ctccacctcc	tcgacccggg	cggatccggc	gctagaaaccg	180
agcaaaaaga	gcgaggattg	cacttctcaa	aaggggcccg	ggaagtcgcc	gagcccgggc	240
gcccaccggg	aggagccggc	cggcaagagg	cacaaggccg	ggggctcccg	cgagcaccgc	300
acgtaccgtg	gggtccgaat	gcggaaactg	ggcaagtggg	tgtccagatg	ccgggagccg	360
aggaagaagt	cgagaatctg	gctcgggagc	taccccaagg	cggagatggc	cgcccggggc	420
cacgacgtgg	cggcattggc	cataaagggc	agcttc			456

<210> 196

<211> 569

<212> DNA

<213> *Eucalyptus grandis*

<400> 196

aaaagcagaa	aaagaaaaaa	gagagcaaaa	aaaaggcaat	cgagagcagc	ttctccattt	60
cttttcttct	cttccgctcg	atccatttcc	aaatccgcag	agaattgtcg	agaagagacg	120
agacgatgtt	cccgagaccc	aaagtccagc	cggcctccgc	cggaaaccgtc	gtgatccgcg	180
aggtgtggcg	ccacaacctc	gagtcagagt	tcagactcat	ccgcgacgtc	gtcgacaacc	240
accccttcac	ctccatggac	accgagttcc	cgggctcgtg	cttcggccgc	cctcctcccc	300
ctctccgcgc	cgggcaactc	cgccgcctcc	gccctccgca	ccactacccg	ctctcaagt	360
ccaaactcga	cgccctcagc	ctcatccagg	tcggcctcac	cttctccgac	cccgacggga	420
acctccccga	ctctggctgc	cccgccggcc	cccgctacat	ctgggagttc	aacttccggg	480
acttcgacgt	cgcccgcgac	gcccacgccc	cggactccat	cgagctcttc	cgccgcagag	540
ggatcgactt	cgagcggaac	cgggcggag				569

<210> 197

<211> 1007

<212> DNA
<213> *Eucalyptus grandis*

<400> 197

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gccgcagctg	cactggacga	ggaaacgagt	ttaaacgaga	tggagctggg	cgtggaaact	180
gggggaactc	tactgatgaa	attgctccgg	agcctgaaga	acctgttgtg	gaagttgaaa	240
aaaaatgtgg	atctgagaag	cagttggttg	atgaggagggc	tgcagatgct	agcaaaagga	300
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aagtggaggt	ggacaaaagag	ttgaagtcca	tgcaacaact	ctctagcaag	aaggaaaaacc	480
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aagagagagc	cgagaaagct	gtcagcataa	atgagttctt	aaagcctgct	gaaggggaga	600
gataactaca	cccagggtggc	cgtgggcgag	gccgtggccg	cggtgccaga	ggtggttatg	660
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ctccatggat	ttactttgct	ttctttttga	ctcacttcag	ttttgattgt	gttagaagag	960
aatgaattaa	gccttttctta	aaaaaaaaaa	aaaaaaaaaa	aaaaaaa		1007

<210> 198
<211> 390
<212> DNA
<213> *Eucalyptus grandis*

<400> 198

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agtaagcagg	agtcgaattga	tactgggtcg	atctgggtcgg	caacttttgt	tggaaagttg	180
aggaatctga	ttgagagaag	aggtagatct	aaaggatcaa	aaggatgtca	tttaccgcga	240
cccaagttaa	atgcaaggct	tgcgaaaaaga	cagtttatcc	tgttgaacag	ttatctgcgg	300
atgggggtgc	ataccacaag	ctttgcttca	agtgacgcca	ctgcaaaaggc	acattaaagg	360
tgtgccaat	ttttcaattg	gtttacaatc				390

<210> 199
<211> 586
<212> DNA
<213> *Eucalyptus grandis*

<400> 199

tgctttctct	ctactctgtc	actctcactc	tcactctcac	tcctctctct	ggctctccct	60
caccattctc	ccagggtccc	cgccgcggta	tcgctgcccc	gaccattctc	gccgtctgct	120
caataataat	cgagacaaag	atgattgatc	tcaacacggg	ggaggacgac	gaaacccggt	180
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ccgacgagct	ttatgcgcag	gtttccctgg	ttcctgaaag	agagcaaat	gagcataaat	540
tgcgcgaagg	ggacaacgaa	atagacttgg	atgaggatga	aattga		586

<210> 200
<211> 619
<212> DNA
<213> *Eucalyptus grandis*

<400> 200

cagaagcgac	cattaaagct	gtctctctct	ctttctctct	cctctctctc	ctctctctcc	60
tcctctctgc	ttttttctga	aacaatcgat	aactctctct	tcacattctc	ctctctctcc	120

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cccccttgaa atccgaatc caccaccaca acccccccacc gccacctgct cgttgggtaa 180
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gagggttgga acagcaaatg cctctcttgc atctgccctc taaaattctt tgagggttag 540
tcaatatcca gctccgggccc gaacctgaaa cagatgaagt ttattcacag ataactttgc 600
tacctgaacc tgaacaaaa

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<210> 201

<211> 376

<212> DNA

<213> *Eucalyptus grandis*

<400> 201

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ggatttctcaa gagcagatct tcaacttgcc atacgttcag caactggaaa atagtagggt 180
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ttctggaaat ctctgggagc tcagtcataa catggctgcc atttggcaatg gggccatggc 300
ctttgacacc gactatggcc ttgggctcga tgagcatcaa cgggtgatca atgacctaa 360
atccggagtg aacttc

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<210> 202

<211> 743

<212> DNA

<213> *Eucalyptus grandis*

<400> 202

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tggtgctctgc ttctgagaat gtgtccggtg gagccatcga acgtcccaga gccacagaaa 180
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gcatggatgca aaatgccaac cctgtgagca ttttgcaacc tgggtgtagtgc ccacctgaag 300
cctggtttaca gaatgaaaga gaactgaaaa ggagaggag gaaacagtcg aacctgaaat 360
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attctctgag tgccgagaat agggctctta aatctgaaat tagtcaacta accgagaact 480
cggataaaat gagggctagaa aatgccaat tgatggaaag actggaaaat gcacagggag 540
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cagagaactt actttcaagg gtaaacaaact ctgggtgccg tgatcgaaga agtgaagatg 660
aggggagaat ttatgaaagg aagtogaatt ccggtgccaa gcttcaecaa cttttggatt 720
caaaaccagc aaccgatgcg gtcg

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<210> 203

<211> 435

<212> DNA

<213> *Eucalyptus grandis*

<400> 203

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ttttctctct cgccccacca cctgaagatg gaggtcgctc cacaggcgga gcatcaccag 60
aaccacacc accacacacca ccagatcac caccagccgc agcaagggga accgggaagc 120
tactttctct cggtctctcc tcgccacca cactatagca ctctgggctc gtgttatggt 180
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ccagagaaac agtcg

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<210> 204

<211> 662

<212> DNA
<213> *Eucalyptus grandis*

<400> 204

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gttttcagaaa	agttgatcca	gatcggtggg	aattcgcaaa	tgatggatcc	atcagaggtc	420
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ag

<210> 205
<211> 694
<212> DNA
<213> *Eucalyptus grandis*

<400> 205

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gatgggctac	gatcttattt	cgctgggaag	agagcctgga	tatgcagcac	tggtcaatga	660
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<210> 206
<211> 1210
<212> DNA
<213> *Eucalyptus grandis*

<400> 206

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gggggtgaaa	ttctcatttc	aacctgattt	ctgtcttgag	ctcgtggggg	gtgagggaga	180
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gaccaacaat gggcgcttgt ttccaacctc aggcgaagctt gtcaacaggc tgaagatgcc 1200
ctaaagcaag 1210

<210> 207
<211> 438
<212> DNA
<213> *Eucalyptus grandis*

<400> 207
aatcaaacac actccccaat ttctctctct aagatccac cccaaccgcc accctcaatc 60
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ccaggccctt ggcggccaca aggcagacca ccgcaagcac gctcctccgc ccggcgccgc 180
cgccgggggt gacgaccagc cgaccacctc gagcaacctc gcggcgacga cctctccggg 240
cgctccgggt aaggtccacg agtgctcgat ctgccacaag agcttcccca ccggccaggc 300
gctcggcggt cacaagcggt gccactacga ggcccccgcc cctatccccg cctctctctc 360
cgccccctcc gcccgccgcg ccccgggcgc cagcggggtg agcggtgcgg agggcggtggg 420
gtccacgcac acgcagag 438

<210> 208
<211> 516
<212> DNA
<213> *Eucalyptus grandis*

<400> 208
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<210> 209
<211> 547
<212> DNA
<213> *Eucalyptus grandis*

<400> 209
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acaactggag agtagcaggc tgaactcac ccaactagag caagaactgc agcgagccgc 240
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caatgtcgcc gcacactttg atgaaatctt caagctgaaa ggcaactgcg caaaagctga 480
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tggtagg 547

<210> 210
<211> 522
<212> DNA
<213> *Eucalyptus grandis*

<400> 210
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aacagttatc	tgcggatggg	gttgcatacc	acaagctctg	cttcaagtgc	agccatcgca	420
aaggcacatt	aaagctgagc	agctactcct	caatggaagg	agttctatac	tgcaagccctc	480
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<210> 211

<211> 1160

<212> DNA

<213> *Eucalyptus grandis*

<400> 211

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cccgaggggg	tttctgtccc	acgtcgagca	gctgaagatt	gctttccccc	tctggactat	180
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tgtcgttccc	tatcagaagt	atctcaaaag	catcaacaac	gtgatatgca	ttgggacaag	420
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<210> 212

<211> 850

<212> DNA

<213> *Eucalyptus grandis*

<400> 212

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tctttttaca	tccaagggcc	agtcacatcg	agtttgtcat	acctctggca	aaatatgtga	180
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tctcgtggca	aaactcaatg	tgccgttcag	taaaaggttg	atgggtagag	tcaactgcag	360
gtgagaggca	gccaaagata	tccctgtggg	aaatgtagcc	actaaacaac	ttccaatgt	420
atcctctctc	attccccctc	agactgaaga	gaccatggcc	atctggactt	ccttcatttc	480
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<210> 213

<211> 534

<212> DNA

<213> *Eucalyptus grandis*

<400> 213

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ctgcaattgt	tgccctaata	gtggggagcca	ccaattccc	tcaactgggc	agtggaatgt	120
aaacacagatg	atagagatga	tccctaatt	ggatttgaag	gacatgctga	ttgtctgtg	180
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cactgctcgc	gaattgatgt	cttacatgtc	catcctctat	caaatttgct	catactggaa	420
gtttgctctac	gagtcggcaa	atgttcta	tggggaagct	ataaagtacg	agtcaagaat	480
ccacataatt	gacttccaga	tcgtccaagg	aagccagtg	atccctatta	tcca	534

<210> 214

<211> 358

<212> DNA

<213> *Eucalyptus grandis*

<400> 214

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<210> 215

<211> 988

<212> DNA

<213> *Eucalyptus grandis*

<400> 215

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<210> 216

<211> 669

<212> DNA

<213> *Eucalyptus grandis*

<400> 216

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tgccgcgcgc	ggagagcaac	tacggcctcc	tcaaggcgaa	cgctcgacgc	atgcacatga	420
tccagatcgg	gctcacgcgt	tcggagcgcg	aggggcaact	cccgcacttc	ggcaccgaat	480

gcgcgtacat	ctgggagttc	aatttttaggg	atttcgacgc	ggcgcgcgac	gtgcagaacc	540
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gcgccgactc	ggccgggttc	ggcgagctgc	tgatgtcgtc	ggggctcgtc	tgcaacgatg	660
aagtgagtt						669

<210> 217

<211> 334

<212> DNA

<213> *Eucalyptus grandis*

<400> 217

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cgccgcaggt	gcactggagc	aggggttgga	ttgtacaccca	agaatgtctgc	atttttagctt	120
tgaacaacgag	tttaaacagag	atggagctgg	tcgtgggaac	tggggaaactc	ctactgatga	180
aattgctccg	gagcctgaag	aacctgtgtg	ggaagttgaa	aaaaatgtgg	gatctgagaa	240
gcagttgggt	gatgaggagg	ctgcagatgc	tagcaaaagag	aatcctttga	atgaaccaga	300
ggaaaaaagag	cctgaagata	aggagatgac	atta			334

<210> 218

<211> 478

<212> DNA

<213> *Eucalyptus grandis*

<400> 218

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aacaaggaga	gacaggacat	tattacacag	attattaagc	ggaatccagc	gtttaagccc	180
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cccggttaca	cttttatagg	acttataata	ggacctaggg	gcaataccca	gaaaaggatg	300
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ttgcagcaga	agaggggatt	gaagcctgat	ccagcagaga	atgaggattt	gcatgttttg	420
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<210> 219

<211> 1677

<212> DNA

<213> *Eucalyptus grandis*

<400> 219

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tgatgattat	gtgtgataaa	tgctgaaact	ctgatgacag	caatagcttg	ttctgttggc	1620
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<210> 220

<211> 916

<212> DNA

<213> *Eucalyptus grandis*

<400> 220

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gcgagatcc	ggctacccaa	gaaccgcacc	cgctctggc	tcggcacctt	cgacacagcc	180
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<210> 221

<211> 567

<212> DNA

<213> *Eucalyptus grandis*

<400> 221

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gcacctgtgt	ttctcagcca	tgaacactcc	ctttaaaccgt	gatgccaaat	cctgcttaga	480
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<210> 222

<211> 985

<212> DNA

<213> *Eucalyptus grandis*

<400> 222

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agagctgcca	tatgctgttt	gttcctcttg	tagttcttag	tgtagcctgc	tagtgtttct	900
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<210> 223

<211> 335

<212> DNA

<213> *Eucalyptus grandis*

<400> 223

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<210> 224

<211> 377

<212> DNA

<213> *Eucalyptus grandis*

<400> 224

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aaagcgcaag	ctacgatgag	acgacagaga	agcagcgaat	caggagaagc	ccgcaccaga	120
agccgtacag	ggtgatccgg	atgaggaagt	gggttaagtg	gggtgctgag	atcagggaag	180
ccaacaagcg	ctccccctat	tggctcggtc	cctaagccac	cgccgtggct	gcccgccgag	240
ctacgacac	cgctgtgttc	tacctccgtg	gccccctcgc	cgccctcaac	ttccccgacc	300
tcattcttga	cgagggccag	gactcgctgg	gtgaggtctc	agccgcctcc	atccgcaggc	360
gtgcagtgga	ggtcggg					377

<210> 225

<211> 394

<212> DNA

<213> *Eucalyptus grandis*

<400> 225

ctcaatctga	cttgctcagg	gtgggatagc	aagaaaagg	tctgaaagt	tttcttgctg	60
aatctctttt	gacctctgga	caatcagaca	cagcatagat	ttaatctgcc	cgaggaaaaca	120
caaaagatgg	ctttactcgg	aaccgtggat	aaatgtaagg	tttgtagaca	gacctttcat	180
gtcgtgacga	tgatgactct	tgaaggcatt	ccctatcaca	aaacctcgtt	cagatgcagg	240
catgtcaatg	ggacgcttgt	gatgagcaac	tattctctga	tggatggtgt	tctctactgt	300
aagacgcatt	tcgagcaact	cttcaaggaa	tccggtgatt	tcaggaagaa	tttccattca	360
gccaaagtcg	acaagccgaa	tgagatgaca	agaa			394

<210> 226

<211> 340

<212> DNA

<213> *Eucalyptus grandis*

<400> 226

gactccccct	atcccccttc	tttctccctc	tcaagaatca	agagattact	atggaaagcg	60
aacgcatacga	tgagacgaca	gaggggcagc	gaatcaagag	aaggccgcac	cagcagcagc	120
agcagcagca	cgacgcggcg	cagaagcctt	acaggggtat	ccggatgagg	aagtggggca	180
agtggtgtgc	cgagatcagg	gagcccaaca	agcgtcccg	catctggctg	ggctctcatg	240

ccacccccgt	ggcgccgcgc	cgcgcctacg	acaccgcgct	cttctaccto	cgcggccctt	300
cgcgcgcct	caacttcccc	gacctcatct	ggcgcgaggg			340

<210> 227

<211> 571

<212> DNA

<213> *Eucalyptus grandis*

<400> 227

cgcactcagc	aaagccaaag	aaagaaacca	gaacacagcag	accagaccat	tcatttccat	60
tcatttccgc	attctctact	acagactcgc	agagatgggt	aagagagaca	gagaggacgc	120
ggagggtcgaa	gcccttgccg	tggccaaactg	cttgatgctc	ctcccccgag	tcggcgagag	180
gcgcgtctcg	aacccgcgaat	cgcggtctac	agagcggatg	ttcgcgtgca	agacgtgcaa	240
cgcgagtttc	tcctcattcc	aggcgctcgg	aggcataga	accagccaca	agaagcagaa	300
gctgatcccc	ggcgccctct	tcacacctcg	ctgcacccgc	gattctctcg	cagccaagcc	360
gaagagccac	gagtgctcga	tatgcggcct	cgagttcccg	atgggccaag	cccttgccgg	420
tcacatgagg	aggcacaggg	cgcgcctggc	ggagggtctg	gcggcagagg	cggcgaaacc	480
tgtgcgggtg	ttgaagagca	cgaatagcaa	gagagtcag	tgcttggtat	tgaactcgtc	540
gctgatggag	gacgacttga	ccttgctttt	a			571

<210> 228

<211> 726

<212> DNA

<213> *Eucalyptus grandis*

<400> 228

atgaggactc	cctggacaag	gaacccccct	ctccgcctcc	tcagagattc	aaggtgcatt	60
ctttctcgaa	gaccttgact	gcctcgagca	ccagcaactc	tggtggattc	tcaggttga	120
gacgtcatgc	ggcgaatgc	ctcccgcaac	tggaatgctc	aaaaaacctc	cctacgcaag	180
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agccaaaggag	gcacctactg	caaagtgggt	ggagtgtttt	tgtagctccc	aaaagacttg	300
tcgctggagg	tgcatattata	ttcctaaggg	cgcaaaatgg	ggaacttcgt	gtaggtgtta	360
gacgagctat	gaaacagcaa	ggcaacgttt	cgccatcagt	catatctagt	cacagcatgc	420
atcttgggtg	ccttgctacg	gcattggcatg	ccattttctc	aggaaccatg	ttcactgttt	480
actcaaaccc	taggataaag	cctgctgagt	tcatcatccc	ttatgatcag	tacatggagt	540
ctctcaagaa	gaattactcc	attggcatga	gattcaaaat	gagatttgaa	ggggaagaag	600
ctccagagca	gaggtttact	ggaacaataa	tcggcattga	agatgctgac	ccaaaagggt	660
ggcgagatac	aaaattggagg	agtctcaagg	tgagatggga	tgagaattct	gccatacctc	720
gtccag						726

<210> 229

<211> 752

<212> DNA

<213> *Eucalyptus grandis*

<400> 229

gttcagaggg	gtcggaaga	ggaagtgggg	caggtgggtc	tcagagatcc	gcctgcccaa	60
cagccgggag	aggatctggc	tgggtcctta	cgacaccccc	gagaaggcgg	cccgcgcctt	120
gcagcgcgcg	gccttctgcc	tgggcgcgcc	cgccgcgaag	ctcaactctc	ccggcagccc	180
cccgagatct	tcggcgcggg	cgctccctctc	cccgcagtag	atccagtcgg	cccgccgagag	240
ccacgcccaac	tttggggcgc	tggcgcgtgc	ggcccgggcc	gagctgcccc	gaccaggatc	300
gcgcggcccg	tcgccttcgc	tgctggcctc	ggaggcgagc	agcgtgctga	cgaccgagag	360
gcagctgacc	ctggacactat	cgcttctgga	ttttctggat	gattcgggccc	cggtttcccg	420
cgagccccat	atcgggaagt	tcgccggcgt	ggaggaggct	cccgacgttt	tctaccacat	480
cgagtcccg	agcgtggaga	gcgcggggct	gaatctcgat	actctatttg	cttcagacag	540
cttcccggtg	cgatctcgaa	gtggactgaa	ggaagaagcc	tgcccgatca	ttctctctct	600
ttttttttct	ttttttttct	ataattcttt	tgatggacta	gatttttggt	ggtcgtctat	660
cacttcagga	taatacagat	gacaagaact	gactttttat	ggtgttaaaa	gacgtagctt	720
ttttgttggt	tcggttcaaa	aaaaaaaaaa	aa			752

<210> 230

<211> 563
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 230
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 acacgtaccc cgacgagcta gacgagagca agcggagcta caggggctcc gcccggaac 120
 gggccgggag gggccgggttc gggccggggc ggacagagtg gtccggccgc gcccgggagc 180
 agctgttcga gaagcccggtg acgcccagcg acgtggggaa gctgaaccgg ctggtgatcc 240
 cgaagcagca cgcggagaa gacgtccccc tgcggggcgg gccggccggc acgatgaagg 300
 gcgtactgct caacttcgag gacgtcggcg ggaaggtgtg gcggttcggg tattcgtaact 360
 ggaacagagc ccagagctac gtgctcacca aggggtggag ccggttcggt aaggagaaga 420
 gcctgaaggc cggcgacacc gtctgtctcc agcggtcgac cgggcccggc aagcagctct 480
 acatcgactt caagcccgcg gggcagcccg cggccggccc gggccgcccg ccgcccgcgc 540
 ccgtacagat ggtgaggctg ttc 563

<210> 231
 <211> 642
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 231
 agtaaaccca ccgaccagaa cctttgtgaa ggttcacaaa tgggggacct ttggggcggtc 60
 actggatatt tcaaaattca cgagctatga tgagctgcgc agtgaactcg ctgcgatggt 120
 tggccttgaa ggccaattgg aggaccctca gagatcagcg tggcagcttg tattttaga 180
 ccggggagaa gatattcctc tctcgggtga cgacccttgg caggagttcg tcaacaattg 240
 gtggatcatt aagattctct cccctcatga agtaaaacaa ctggggcaac aaggcataa 300
 ccctgcgaat tctgtcccaa ggcaggctct ctgagtgcat cagcggtattt gattgagcatg 360
 ttgggtcgac agagttgacc gatctgagct ttggggtagg cagatgatgg ggtcgcgtgg 420
 actacttgaa gccgagtcgt ttgggttaag aaacggagctt ggctctctgat agtggtttgac 480
 cgtgtgtgag tgggtaccta tgagaaaaaa gaggttgtagt aatatattgc ttcgagagat 540
 gtgtagcagt ggtaagctca tctcaagttt gctttataac tgaataagttt aacaccaagg 600
 atgattgaag agaattgacat cgacattccc gtaaaaaaaa aa 642

<210> 232
 <211> 1358
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 232
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 ccccacgctc tccgcccgac tccgactcgg actcggcgca gtcaaacccac gcccccgcgc 120
 agtcctcgacc ccccgggccc atgacggcgc gatgctccca ctgctgcaac aagggcgaca 180
 actccaggag ctgcccgctc cgcggcgccg cgggggacgg cggggcgccg gccggccgcc 240
 cctcctctct cctcccctcc acctctctct ctggcgccgc ggcggcgccg gcggcctcgg 300
 cctcggcggg cgggggtgag ctggtcgggg ttagggttaac ggacgggtcg atcatgaaga 360
 agagcgccag cgtgggggtc ctgtccggcg cccactacca ctctcgtcc tccgcgcggg 420
 catcccgcga ccccggctcg tcccgcgatc acgggagcga cggctacctg tccgacgatc 480
 ccgcgcgcgg ctcccgcctg tccaatcggc gcgtcgagag gaagaaaggt aacccatgga 540
 cggaggaaga gcatcgaaag tttttaattg gtctccagaa attgggtaaa ggagactggc 600
 gagggatagc tctgtacttt gtgactacaa ggactcctac tcaagtggca agcctatgcc 660
 agaagattaa tatccgggag agtaatgctg gccgaagaaa gaggcgctcc agcctttttg 720
 agatggtctc agatatggct actcgtgacc aaccctcaca tccagaagaa acattttctgc 780
 ctctctttgt cagacttaac gatgatacta actcaacac actcaaccagt ttgggactcg 840
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 ttgcgatgga atcaattgat caagtaacctg ttgtaccctg ttacttccca tactatttac 960
 cactacacct tcccattgtg cggcccaaca tggcgctctc tgaagatgga aggggtggtg 1020
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 tcgacaaat agttggaatg tctcagctaa gtctgtcgtg gaatgaactg gcaccactct 1140
 ctttgaaagt tctcggggaa acatctcgac agtcagcatt tatcaaggcg cctctctcag 1200
 tcaatgaatc ggatctcgac aactgcaagg atggcgccac tcaagcagct tgactcgtgc 1260

ctaagatcag	cgaagggtta	gttcttgtga	atctttctgt	aaaaccatct	gtattggtgt	1320
cctccttttc	ctgtgtgata	tgctttcttt	aggcttttc			1358

<210> 233

<211> 506

<212> DNA

<213> *Eucalyptus grandis*

<400> 233

aaataactac	ctaccctttt	ctaagaactt	tggtctttct	tcggaacagg	tgaaaagaag	60
agtataaatt	cagagtttat	gcattgctgt	gcggggccat	tggtgtcttt	gcctccagtt	120
gggaggtctg	tggtcttaact	tcctcaaggc	ccagtgtagc	aagttgcagc	atcaatgcag	180
aaggagacta	cttgtgtacc	cagctacccc	aattctgccc	caaaagtgtg	atgcattgctt	240
cacaattgtga	cattgcattg	tgatctcgaa	actgatgaag	tctatgcaca	aatgacccctt	300
caacctgtaa	gcaaatatga	ccaggaggcg	ttactggcat	ctgatatggg	cctcaagcaa	360
agcaggcagc	ctacagagtt	tttctgcaag	acgcttacgg	ctagcgacac	aagtactcac	420
ggtggatttt	cagttcctcg	tcgagctgct	gagaagatct	tcctcatcct	agattttact	480
atgcagccac	cttgccagga	gctaac				506

<210> 234

<211> 420

<212> DNA

<213> *Eucalyptus grandis*

<400> 234

taaaaaccat	gcagttcttc	agccaactgaa	catggcgctt	gaagctctca	actcgccccc	60
cgccgcgcgc	cccttcggcc	acgacgacgc	ggacggccac	ccgtggggcca	aacggaaagcg	120
ctccaagcgc	ccccgcggcg	accctcagga	ccagccctcc	gaggaggagt	actggccctt	180
ctgcctcttc	atgctgcgcc	gccgcgcgcg	ccgacccggc	agcagcgcca	ggctccacga	240
gtgctccatc	tgccacaagg	ccttccccac	cggccaggcc	ttggggcgcc	acaagcggtg	300
ccactacgac	ggcggcagca	gtagcagcgc	gcgccgtgct	gcctcttctt	cagaagcggc	360
cggctcctagc	caacagactg	tcagccaccg	cgagccgata	gacttgaact	tgccggccctt	420

<210> 235

<211> 476

<212> DNA

<213> *Eucalyptus grandis*

<400> 235

gcgacacctt	ctccaaagtg	gttggctgct	gtttgtcagc	tctaaaaagc	ttgttgctgg	60
tgatgctttt	atatatctca	gaggagaaaa	tggtgaactt	cgtgtggagg	ttagacggagc	120
gatgaggcca	cttaataatg	ttccatcttc	gattatgccca	agtcacagta	tgcatatggg	180
tgctccttga	acagcatggc	atgccatttc	aactgggtaca	atgttccact	tgattatacaa	240
accgaagact	agccctgctg	aattcatcat	tcctttcgat	aagcacattg	aattctgccaa	300
atttgattac	tcatttgctg	tgaggttcag	aatgacattt	gaatggtgaa	gaagctccag	360
aacagaggtt	ctctggcact	gtaattggat	ctgaggatgt	tgatcctccg	aggtggcctg	420
gatcaaaatg	gagatgcctc	aaggctgcgg	gggagtgaat	cacttccatt	catcgc	476

<210> 236

<211> 799

<212> DNA

<213> *Eucalyptus grandis*

<400> 236

cttctcttgt	gcattgacatt	tcagaaaaatg	gggaagctga	tgaacagcaa	aaacattcag	60
aacagcatga	gtcctccctc	gcaactggag	tgctctatcc	tggtgtctct	ttgcccaatg	120
tcctaatatg	aacgcctcca	caacttggag	cgggacatgc	catgacacca	cctgtctacc	180
cctatccaga	cccttattat	cgaagcatct	ttgtctccct	tgatgcgcag	tcgtacccgc	240
agcagcccta	tggtgcacag	cctatggctc	atctgcgaat	aatgggaatt	caacaagctg	300
gagtgctctt	gccatcagat	gcagttggag	aaactgtatt	tgctcaatga	aaacaatatc	360
atggcatctt	gcggcgctga	cagttctcgt	caaaagctga	gttagagaac	aaagctctta	420

aatctcgcaa	gccttacttg	catgaatctc	gacattttgca	tgcattgaga	agagctagag	480
gatgtggggg	gcgggttcctg	aacgcaaaaga	aggatgaaaa	tacgacagagc	gaggtttctct	540
cagcgacaaa	atcacaggga	aatatcaatc	tcaactctga	taaaagcgat	cgctcgctct	600
gaggtgcaac	ttcctgatca	atgcaaaagta	atctctttcg	tgcataaatc	atgcctgttc	660
atcaatagat	ttccctacc	tagcctagcc	taccaaatg	ccctgctctt	ctgctgttag	720
gtcagtcctc	ttagtgtgta	gtgtgaatct	gtttgtagtt	ctgagggaaa	ccctgctgcat	780
agatagtagt	ttcgatgag					799

<210> 237

<211> 298

<212> DNA

<213> *Eucalyptus grandis*

<400> 237

aagtgaagga	tatgtttcaa	gatcaaagg	aaaagtacga	cacgttcttc	gaggttatga	60
agattttcaa	ggctcaagg	actgacacta	caggagtcac	agcaagagta	aaggaattat	120
ttaaaggcca	taacaaatta	attctgggat	tcaatacttt	cttgccaaag	ggattttgaa	180
tatccccgca	cgaggatgaa	acaccaataa	aaaagaatgt	ggaattttgaa	gaagccatct	240
cttttgttaa	taagatcaag	aaacgcttcc	aaatgatga	gcattgtctat	aagtcatt	298

<210> 238

<211> 521

<212> DNA

<213> *Eucalyptus grandis*

<400> 238

tccttctctc	tccttctctc	tctctctcgt	ctcttctcga	catgtcgtct	aaccaccccc	60
tctctacttc	agacgggacc	ccccacactc	tctgggtggac	cactcaccctc	accatgttct	120
gccagcacia	cctctctctc	aatttcaacc	ccaccgacga	cgaccgccaa	gacgagggct	180
cgcccccgcc	gcctctacgt	ctccgagggg	cgccgccacc	ggccggagccg	tcgcttgacg	240
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agctgagctt	cgaggacgag	tccgggaagt	ggtggaggtt	ccgtactctc	tactggagca	420
gcagccagag	ctacgtctct	accaagggtc	ggagccgctt	cgtcaaggac	aagcgccctc	480
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<210> 239

<211> 337

<212> DNA

<213> *Eucalyptus grandis*

<400> 239

gcaattcttg	ctgccgggga	ggggcaaatc	gggaacagac	gataagggga	tggcacagcg	60
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gcgcaaggac	ctgctcccca	gctctttcaa	gcacaacaac	ttctccagct	tcgtccgcca	240
gctcaacacc	tacgggtctca	gaagatcgt	gcgggacaaa	tgggagttcg	ccaacgacgg	300
cttcagacgg	ggccagaaag	aactcctctc	cgagatc			337

<210> 240

<211> 334

<212> DNA

<213> *Eucalyptus grandis*

<400> 240

aggatgtgga	gggacaagat	gcgtctcaag	cggtctaaagg	agcagacaaa	ggggaaggag	60
ggagttgata	tcgccaataa	gcggcagctc	caagagcagg	caaggaggaa	gaagatgtcg	120
agagctcagg	atggaattct	taagtacatg	tgaagatga	tgggtggccca	ctggaaacga	180
ggactgggtg	ccccagctgg	gtttgcccga	ggatcaagga	gccccgcctc	acaagaaacc	240
tcatgatctt	aagaaggcat	ggaaggttag	tgttctccag	cggtgtgatca	agcacatgtc	300
ttctgatata	gccaaagata	gcaagctcgt	gagg			334

<210> 241
 <211> 422
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 241
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 caccgccagc agcaccagca ccagcaccag caccaccggt ccagcaggtc gacgcctcg 240
 cacgacgagc ccagggcaag ggagggaagc gacgtcaggg atcccggtggc cgcgagggaaa 300
 gtccagaagg ccgaccgcga aaagctaagg agggatcgct tgaacagaca ctctcttgaa 360
 ctggggagca cgctagatcc tgatagacct aagaatgaca aggcaacctc tctcacggac 420
 ac 422

<210> 242
 <211> 737
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 242
 aaaaagacca tttcttccga acacaagagg agggcggtgg tgggtgggtg gttgctgctt 60
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 ctgaatctac cgaacccttc tcgcccgaagg agggagagaga gagagagaga gagagagaga 180
 cgggaagacc atcgctttcg gccatcgctg gcacgagcag tcatgaggag aggcagatgc 240
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 gctgcgcgcg cggcgccgga acccagatcc agggcgctcc ggcggaagtc gctgggcgca 360
 tacacggcgc agatcagaga ccccgggacg aagaagctcg tgcggtcgcg cactttcgcg 420
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 gccaggacca acttccccgt cgcgccgtcg agtttccctc cggcgcttcc tcgcgatctg 540
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 gaccacacag acgtcagccc gcagagaccg acctcgagca gcttaagcag caccgtggtg 660
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 ccgcgcgcgc accgcgcg 737

<210> 243
 <211> 542
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 243
 ctacaatagc aactcagatc ccattagaga ggaattcatg aaagcactag agccttttat 60
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 tccaaaacaa cagcttaatt tgaatcctga cctttgctcc tcttgatag taaccocgat 180
 ggggtctcga caatccgctg cgattgggct caaccgactc tccattctc aaatccaaac 240
 tatccaggac gaaatgctac tccgacgtca aaatcaagaa ctttggttag ctccgctgt 300
 gaaatctcct ctccagcagc aaaaattcga ccagtgctcg taccaaaacc accacggctc 360
 tcccattctc ctccggcgga aagccctctc aatgaagcgg gtggagatgc ctccgaaacc 420
 caacaagcct tacaggggag tgaggcagag gcactggggg aatgggtgg ctgagatcag 480
 acttcccaag aacaggacac gcctctggct cggcactttc gacaccgcgc agggaggtgc 540
 tc 542

<210> 244
 <211> 848
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 244
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 cgacatctct tggctcgatc aactggtgga gccgcgcgcg ccgcgcgcgc cgcgcgtgc 120

gcgcgctaac	ccaagcgcc	tttcacgcta	tacaaaccgg	ctgccgagtc	aagaccgagg	180
gttcatgccg	aaaccgggga	ataatatgaa	caagcgggtg	atggagttct	tgaggaggag	240
ctgggcccga	cgagcccgaa	tccaagaatt	cgaccgcgaa	cggggttttc	gacacatgct	300
gagcgagagg	atgaggaggg	agaagcagaa	gcgtagctac	tcggcatctg	tctccgaatt	360
gcctcatggt	accaagaatg	acaagaactc	catcgtccaa	acagcttgca	tgagaatcaa	420
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gaacgagaag	agcggaaggg	acaaagctga	agggaccaag	atcagagtca	agattgcgaa	540
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gaaagctacg	gcgattcaaa	cgcagtgtc	ggccgaccaa	ctcttcgccc	tgatcgagggt	660
tgaaaatgag	gtatgtgcac	aacaatccga	tgccaatgta	cactaatcac	tggttcatgt	720
tcttcgcacg	tgattttcat	ttttctcgaa	tgtaaagtaa	gaactgtgac	gatgttcagt	780
cagcacaagt	tcgaaatttt	cccagtcct	gggaagggtc	ggcgtcttcg	tttctgggtg	840
caagcatg						848

<210> 245

<211> 181

<212> DNA

<213> *Eucalyptus grandis*

<400> 245

gacatggcgc	gacgtggcgc	aggaaggagg	cgaaacggcg	ctccgaggcg	tccgacgcgc	60
tcttgccgcg	agctcatcat	cgccatcggt	acaaggagg	gaggatgcgc	aagtggggga	120
agtgggtggc	ggagatacgc	cagcccaaca	gccgggacgc	catctggctc	ggctcctacg	180
c						181

<210> 246

<211> 117

<212> DNA

<213> *Eucalyptus grandis*

<400> 246

cgagctgctg	cagatccaga	ggaagaggaa	gaggatggag	tgaaccggcg	agtcggcgaa	60
gcgctcgccg	ctgcggaagc	agcagcactt	ggacgagctc	acgaccgagg	tggtgtcg	117

<210> 247

<211> 597

<212> DNA

<213> *Eucalyptus grandis*

<400> 247

tctctctctc	tctgtttctc	ccgtttctct	ctctctacct	ctcgccaaga	aaaccgccagg	60
aaagggaagga	aggtaaaaag	aaaagaaaag	gaagccatgg	ctccgagaga	aaagcccagc	120
gtccgcacga	tcccacaccc	taacggcgct	aaggaaatcc	gtttccgggg	cgctcggaag	180
aggccctggg	gccgctacgc	cgccgagatc	cgggaccgcc	gcaagaagac	ccgggtgtgg	240
ctcgacacct	tgcacacagc	cgaggaggcc	gcccgcgcct	acgacaccgc	cgcccgcgag	300
ttccgcggcg	ccaaggccaa	gaccaacttc	cccacctccc	ccgagctgat	ctctctctcc	360
gcagccccc	gccagagcag	ctccctcgac	gagccctccc	cccgcggccc	ggccggggcc	420
gtccaggccg	cgccctcgcg	ccgcgccctc	gacctcagcc	tcggccgcc	cccgtcgcc	480
gcgcgcgcgc	cggggcccg	gccttacttc	cccgcggcg	ccgcaatgtg	cttccgggtg	540
atgcccccgc	cgccggggcc	gggtttcttc	tgcgacctc	tcggccgcat	ggagcat	597

<210> 248

<211> 361

<212> DNA

<213> *Eucalyptus grandis*

<400> 248

gaggctcagt	acttcgtgta	gccatggggc	atgaaagtga	agcatttgaa	gagtttgttg	60
atgcgcacaa	aacttgcttg	aatgatctca	tggtctctcc	tactcgtaat	gccttgagct	120
ctcaagtgtt	gctgcacatg	cagaaaaagt	tgctgccttg	cagaacgaat	atcattttgc	180
taaagcaagg	attgatgaag	atcatgagaa	ggcgacgcga	ctggagaaga	aggtcaaaac	240

tctcacattc	ggctatcaga	tgcggggagaa	gactcttcga	gaccaaattg	agtcaacctt	300
caagcagctg	gacactgcag	ggacagaact	cgagtgtttc	ccagctctgc	agaagcaaga	360
g						361

<210> 249
 <211> 472
 <212> DNA
 <213> *Eucalyptus grandis*

ccatcgtcac	ctgtatccac	aaaaacacac	ccaccttacc	tetgaccccg	ccccacccgc	60
ctatcgagg	gctctgggata	cagacgcttg	gctgccaaagc	atgaagagaa	gccctccgct	120
gtgctcgaca	aatcccaaga	tcccacagac	agcgcaaaagc	catccaagaa	gccccgccat	180
cgctcacagt	ccaccagctc	cgtcgccctc	aacgaactct	ttgagaaaaag	cgaacacccc	240
actcttgag	agcgaggcca	gttggtctgag	aaataggaa	tggagaccaa	gaccgtcaat	300
gcatggtttc	agaaacaagc	tgtcttctact	aagaagcgca	ataagggggg	aacctcgaa	360
ctcaccacag	ccacgagctc	gaaacgacttg	tccgaagatg	ctctcaaaac	cccttcgca	420
ctgcgctcga	tagcgaacct	gctcaacgac	gcacctctcat	cggctcgcgc	gc	472

<210> 250
 <211> 302
 <212> DNA
 <213> *Eucalyptus grandis*

ccccgcccac	ttatctgcta	tctctgctac	tctgctctat	tagtacctcc	acaatcccat	60
gcgcgcaagc	caacgcaccc	tcgacatgca	cgccggcgca	ccaggtccca	acgatgccat	120
tgacgcgaac	agcgtcgccg	acaacgcggt	catcgccgat	cacgacgcaa	ttgactcgcc	180
cgcgacgac	gacgacgac	aagacaagcc	caagaccggc	cagaagcga	gccgcgca	240
aataaagatc	gagttttatc	aggacaaatc	gagacgccat	atcaccttct	ccaaaaggaa	300
ag						302

<210> 251
 <211> 708
 <212> DNA
 <213> *Eucalyptus grandis*

gatacgttct	cttcttcgag	tgctctggac	agtaggagct	cctcaaacgc	tacttctggg	60
gtgaccttag	cagaggtttt	accaaacccc	gggcagttct	agagttcagc	tgatttcagg	120
ttttttgtca	gtcatctctg	tgggggttct	gattcacat	cttcttcata	cgcagcagag	180
catgttaata	caatccagac	tcaagagata	catttgccag	tgccgcagga	caatgcagat	240
ctccctgatg	caaatctttt	gggttcggaa	actgcaagtc	ctgactatct	tgaacctctg	300
tccgcagctt	tagatgggac	catgggatgc	gagtcagatg	ctttttcttc	tgaacgagat	360
cgcggaatta	tgtctgatga	tgttaactat	cttccagcga	tcaagtatgt	cttctgggaa	420
cagtttcttg	cgccaaagtc	actacttgca	gacacagagg	agattagttc	gacctctcat	480
gaaactggca	tcacgaatga	tcaagagtc	caactaaagg	tggagaatgg	atttgagaag	540
gccattatca	tggatcatct	taccaaacag	atgggtcatc	tcaacctcaa	caacggaa	600
ggaatgatag	ttcttatctc	ctttgtacac	tggataatct	ctttcagact	agaggtgaat	660
gccaatgcag	gatgcgaata	acaaattatg	ccaaaaaaaa	aaaaaaaa		708

<210> 252
 <211> 563
 <212> DNA
 <213> *Eucalyptus grandis*

atttttcaac	tccccccccc	caccccgaa	caaatcccat	tccctctctc	cttccctccc	60
tttttttccc	ccaatctttt	gttgcgtttt	caagcaccga	cgcctcccaa	tctccaaagc	120
catcaatcaa	gctcaagcac	catcacctca	agaagaaaga	aggaaagaaa	gagagaagga	180
cgggagacc	gacagagggt	cgcgcgcgca	cgagacatgg	gacgatcccc	ttgtctgcgag	240

aaggcgacac	ccaacaagg	cgctggacc	aaggaagagg	accagcgcc	catcgactac	300
atccgcctcc	acggcggaag	ttgctggcc	tcctcccca	aactcgccg	gctctcagg	360
tgccgcaaga	gctgcaggct	caggtagata	aactacctcc	gccccgacg	cagcgccgga	420
acttcaccca	ggaagaagac	gagctcatca	tcaagctcca	cagcttgctc	ggcaacaagt	480
ggctctgat	cgccgggaga	ttgcccgaa	gaaccgacaa	cgagatcaag	aactactgga	540
acaccacat	caagcgcaaa	gct				563

<210> 253

<211> 397

<212> DNA

<213> *Eucalyptus grandis*

<400> 253

cctcgatgta	acgaaacag	ctgcacgagg	aatttgccgg	tagagagata	aagaggagcg	60
atggagatga	agggagggg	cgccccgaaa	gaggaggagg	cgctcgccga	cgtggggcga	120
cgccgcgcgc	cgccgcgcgc	cgccgcgcgc	cccatggagg	ggctggggcga	agcgaggagcc	180
gcccgcgtcc	tgacgaagac	gttcgagatc	gtggaggacc	cgccgacgga	cccgatcggt	240
tcgtggagcg	aggggaggaa	cagcttcctc	gtctgggacg	cccaccagt	cgccgtcacc	300
ctgctcccca	agcacttcaa	gcacggcaac	ttctccagct	tcattccggca	gctcaaacac	360
tacgggtgtg	tcgatgagta	tgatactgca	agtttta			397

<210> 254

<211> 353

<212> DNA

<213> *Eucalyptus grandis*

<400> 254

gaattacacc	caaccaaacc	aaaagagtca	taattcagga	tcacacctgt	ttagttaagc	60
aagaataatt	ttcccttccc	ttttctcttt	ttgagccctt	tagagttaca	tgctctgggt	120
agcaatgacg	gggaactctg	gggtggggctc	aaactccatg	gaagaggcgt	ggaggaaaagg	180
tcctctgact	gctgaggaag	acaagttaac	catagagtat	gtgaagtctc	atgggggaagg	240
aagatggaac	ttctgtgaag	ggctcacagg	gctcaagagg	aatgggaaga	gctgtagatt	300
gaggtgggtg	aattacttga	ggcctgacct	gaagagaggt	cagataaccc	ctc	353

<210> 255

<211> 541

<212> DNA

<213> *Eucalyptus grandis*

<400> 255

accaccacca	gtaccaccac	ctccctctct	ctctctctct	ctctctctcc	ttttccctct	60
gttcgtgttc	ggtacgattg	cgaagcgga	agcgaatgct	ccctcccgga	ttgccatgaa	120
ctccaacgct	tcctccaacc	cccagtcgat	ggccacctcc	acgacgtcgg	cgaccacgcc	180
ggcggggggc	ggcgacggcg	gcaagaaggt	caggaaagccc	tacacgatca	ccaagtccag	240
ggagagctcg	accgagggag	agcacgacaa	gttcctcgag	gccctccagc	tgtttgacgg	300
cgattggaag	aaaattgagg	attttgtggg	ctcaaagact	gtcattcaga	tcggaagcca	360
tgccacagaa	tactctctga	aagtccaaaa	gaatggggca	gttgccatg	ttccacctcc	420
tgcctcctaa	cgcaaaagct	ctcatcccta	ccctcaaaa	gcattcga	atgttttagt	480
gcccgtgcaa	gcattccatg	cccagccttc	ttcaacaagt	cctgctttta	caattacacc	540
t						541

<210> 256

<211> 477

<212> DNA

<213> *Eucalyptus grandis*

<400> 256

agatagtcga	agctctctgc	ctctctctct	ctctctcttc	tctatcttca	tctctgctgt	60
cttgatcgct	ctcatctcgc	tctcggaagt	gttgctcttc	gtcttctcct	ctgtcccgca	120
ttcaaaagtc	acctattctt	tccgtttggg	ttggcggtgac	taagaaacct	ttctctctct	180
cgctctgtgt	cactctctgt	ttctcccgac	ttttctggga	ttgatgaaa	tgccggaaag	240

atcgaaactcg	tgggaccggg	aaacaagccc	ctcgaaactca	ccctccacct	ccctcgtcttc	300
ttctctgtac	tgcgccgacc	cgcgcccgcc	ggcgccgctcg	cccgcgcggg	cccgcgagacc	360
gttgagatcc	tccaagcggg	gcaagcaccg	gggtgaccgc	gggggtccgga	tgaggaaactg	420
gggcaagtgg	gtgtcggaga	tccggggagcc	ccgcaagaag	tcccgcatct	ggctcggg	477

<210> 257

<211> 351

<212> DNA

<213> *Eucalyptus grandis*

<400> 257

ggaaatggag	gtcaagggttt	aggatggcgg	gggtttcaaca	gttcccatg	agttctgcag	60
ttactgatgc	tgtcagaaat	ctattaaagg	aatataacga	gaattataga	atcgagagaga	120
aggatggagc	tctttatctc	tggtggaggga	atcgagctat	ggcaacttct	tctggctgggt	180
ggatgaaact	gtgggtttttg	acgagctctg	aaagttttgt	actagtttga	gttcatgtttt	240
agcttgatga	ttagcttttaa	ttctacttcc	ataggatcaa	gggagcaatg	tctagaactt	300
ccactacact	gtcataaaat	tcccaacttg	aatttgaaaa	aaaaaaaaa	a	351

<210> 258

<211> 360

<212> DNA

<213> *Eucalyptus grandis*

<400> 258

tggtgtaggg	ttccctgac	ctgggcccga	caatggccag	gtgctggatg	ctcgggaccc	60
actggccgag	aagaaacttg	aacttgcaac	ctgccaaaagg	agggtagaag	aagaaatgct	120
gaaacattcc	aaggcagtg	aagtgcagag	gacaagtacc	ttgaacaatc	ttcaaacggg	180
tctgccagga	gttttccagg	cattagccag	tttttcatcc	ttgttcatgg	aggtccttga	240
cacggatgat	accggttctt	atgctatcaa	atagacatat	gtataacat	tctttcgggc	300
cgggtattttt	gttgaagtgg	gaaagatgag	agctgggttaa	ttttggcggt	tagctctcgc	360

<210> 259

<211> 318

<212> DNA

<213> *Eucalyptus grandis*

<400> 259

ttcttctctc	ctctctctcg	ccccttctga	atagcccgag	atatttaatt	ctctctctctc	60
cgtttctctc	ctctctccgc	ttctctctct	ccatcatttc	ctctcgaaac	ttctcggaact	120
cgctcatcgt	tgcgccagctc	cgatcttctg	cccctctcgt	ccatggccgc	cccgcgcggg	180
gagcagagcg	gctcggcctc	cggcgggagag	agccagcgct	ccgtccccac	cccgttctctc	240
accaagacgt	accagctcgt	cgaagcaccg	gccatcgagc	ccgtcatctc	ctggaacggc	300
gacggctctc	cttctcatc					318

<210> 260

<211> 503

<212> DNA

<213> *Eucalyptus grandis*

<400> 260

cttaaatcag	ctgcgaagtc	gttttatctc	cttcgatttc	tgaagaatcg	tgctcgtctt	60
ctctctctcc	tgcagcatta	agaatccgat	tttgatccgc	gcggtcgatc	gtcggcggtc	120
ccgattcggc	ggcgccggag	gcggaagatc	gggtgctcgg	cgcagctctg	cgtttttccg	180
gctcgaatcg	cgtcgcggg	tgaggtaggt	gagtgctcgg	atcgtgtttt	tccggaggctc	240
ttcgcggcgt	cgtctctgtt	tgatcggatt	gtggtctgat	tagccccccc	taacttaacg	300
ggcgctgttt	gggttagggg	tcggttcggt	tggggggtgtt	tcgaagatgg	accgatggga	360
tatagtgggg	aaatcgaagg	aggatgcgtc	gctccccaaa	gcaactatga	caaaaattat	420
aaaggaatg	ctacgcccg	atgttcgtgt	tgacagagat	gctcaagatc	tatttaacga	480
gtgtgtgtga	gagttcataa	acc				503

<210> 261

<211> 546
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 261
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 agtggggagaa aatgagcaca aatgggttgc tgaagtttga ccaaagtctt tagtgagatg 120
 gttgctgtct ccccgctctc ctccaaacag atgtctgac aaataactta cttgaccgcc 180
 agtatgaact ctctttagc ccagcttgtt aaccacaagaa ggatgcacac ctacgagcca 240
 tttgaccagt tccccatgtg gggagacacc ttcaaagctg acaaggtcaa aaatctcgag 300
 gcatcgctcat ctgtgatcgt gcatgcagta gatgatggat tggacaagaa gtttgaatat 360
 gtctctcatg aatccgcaga aaattccagc tccaggagcg atcaagaagc aaatagacct 420
 gacaaggtac agagacgtct agcacagaac cgtgaagctg ctcgaaaaag ccgtctcgcg 480
 aagaagaat atgtacaaca actagaatca agccgcttga agctagcaca gttggagctg 540
 gaactc 546

<210> 262
 <211> 883
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 262
 gcttcgtgta cgggatcatt cccgagaagg gcaagccagt gaggcggtgcc tccgacaatc 60
 tccgagcctg gtggagagaa aaagtggagt tgcacgggaa cgggcccgcg gcgatcgcca 120
 agtaccgggc ggaccactcg atccccggga acgcgaggga cgcggccacc atcggcccca 180
 ttctccacac cttgcaagaa ctgcaggaca ccaactctcg gtgcctctta tccgctctga 240
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 ggtggcctac aggagaagg gagtgggtgg cccagcttgg cctgcccgcg gaccagggag 360
 ctccgcctca caagaaacct aacgatctca agaaggcttg gaaggtgagc gtcctcacgg 420
 ctgtcatcaa gcacatgtcg cgggacatct ccaagatcag gaagctcgtc cgtcagagta 480
 aatgtctgca ggataagatg accgcaaaag agagtccac gtggctcgcg ataatacaac 540
 aggaagaagg tctgtccagg aaattgtacc ccaatagctt cccgcccgtg tgttcggaca 600
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 ggccaaaggt gtctacaggc gacttttga tccatccact ggtttctcaa atcaaaaggag 780
 aagtttaatg aaccaaaacc aattcgcggc tagtttcaa gaggaatcaa ccatccgatg 840
 agccgaaggc gaagatggat cagaagatat acacatgcga gtt 883

<210> 263
 <211> 454
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 263
 gttcgcagag ttccacagca gctgacaaat cattgatcat ggagcatgag tttagttcgg 60
 ctaaaaatcaa agctcttctt gagattctac agtcgcaatg cagaggagaa agtgcaaatg 120
 cagagcttca tgggtccatg ggctgtgacg atgagtctct tttgaaaaat acaggcaccg 180
 gggattctac atacagagtt aaagctgtta agcacacaac tgtttattca agttctctcc 240
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 aacaaaatct gatccatttt ggcatataat atagacggct tgatggaaac atgacccctt 360
 ctgcaagaga caaagctgtg aaagatttta acaccgatcc tgagatagtc gttatgctaa 420
 tgtcatataa agcaggaaac ctgtgtctaa acat 454

<210> 264
 <211> 579
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 264
 agtgaattcg gtggggagtt aatgaatcca agaagcaact ggctaatttg atataatgat 60
 gatgagggtg acatgatgct tgttggggat gaccggtggc aggaattttg tggcattgtc 120

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cgaaagattt ttatttatac tagagaggag gttcaaaaga tgaagccagg gactattagt 180
gccaaagatg aggacaattt gatggtcgat gaaggggtgt ttccaagaa aatgactctg 240
gacacgtctg ctctggcggtc tgacccaaag aactgttaaa attctctcat gtctgtgagg 300
tctttaaagt cattgggagaa gccctaatac gccgctacag ttccctgatg ctgaaattca 360
tctttgtcca cggggactgc acataatctt ctctgtctat atccctctgt ctccagtgc 420
cattttctgc cccgcaaaag cgtatttcta tcatcaatgg gattcttgga ttggccttca 480
agatgcatag cccctgagg aggccagaga gccctgacaga gaactacggc agattgaaaa 540
ggagagaaat gaggcctgtt cgtattcagc attttgaga 579

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<210> 265

<211> 366

<212> DNA

<213> *Eucalyptus grandis*

<400> 265

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ttgatgggat tctcagggtgc ttgcactaag gtattcgagg ctttgaataa ccccgcgag 180
caggtaggca gtcgtgagaa tgagcccggt gttttgcctg cgtgatttca tggatgcctc 240
aggccgtgtg actaatttgt ttcaacattt ggttaaacctt gataaggtgt cattgcattt 300
gcatagaaat atctggaat tcttttttaa ttttggtttg atcttagctt gaaaaaaaaa 360
aaaaaa 366

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<210> 266

<211> 376

<212> DNA

<213> *Eucalyptus grandis*

<400> 266

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gcagattctc ccccccgaag ccaagatctc gaaggaggcg aaggagacga tgcaggagtg 60
cgtttctgat ttcatcagct tctgtcacgg tgaggccctc gacaagtgc acaaggagaa 120
gcgcaagacc gtgaacggcg atgacatcgt cggggcactt ggttccctag ggtttgatga 180
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cagccaaaac aaggtcacag cgggcgaatc aagaacactt gataaggtgt agcgggatga 300
gtcgccggag aagcagctg gcgctgcctc ttcgtgcctc ctgaagtctt ttgatgtggc 360
gcagaggagt accaat 376

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<210> 267

<211> 341

<212> DNA

<213> *Eucalyptus grandis*

<400> 267

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gtcaactcgg tgttcgagct gcacaagctg ctggccccc cgggggcgat cgagaaggtt 60
ctgggcgtgg tcggccaggt gcggccggcg atcgtgacgg tggctcgagca ggaggccaac 120
cacaaacggc cggctctcgt ggaccgcttc aacgagtcgc tgcactacta ctccaccttg 180
tgcagctccc tggagggtcg cccagcacg caggacaagg ccatgtcgga ggtctacctc 240
gggaagcaga tctgcaacgt ggtggcgtgc gagggcgcgc accgggtcga gcgccacgag 300
accctcgccc agtggcgggt ccgctcgccg ggcgcggggt t 341

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<210> 268

<211> 343

<212> DNA

<213> *Eucalyptus grandis*

<400> 268

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tcgtgtttca atacctccaa gtogaacaag cacctctggg agcagatctc gtccaagatg 60
agagagaaag ggttcgatcg ttccccgacc atgtgcacgg acaagtggag gaacctgctg 120
aaggagtata agaaggccaa gtaccaggat agaggatccg cgaagatgtc gtattacaag 180
gagattgagg agattctcga ggagaggagc aagaataatc agtataagag tccgacggcc 240
tcggcttgga aggtcgatcc ctacatgcag ttttctgaca aaggcatctga gggatctggg 300

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atgactttctg gacctgtaga agcaagtgtg agggcgactc tca 343

<210> 269
<211> 546
<212> DNA
<213> *Eucalyptus grandis*

<400> 269
atgactctga actaaaagtg cgagaactgg aaactgtcat gctaggagcc agctcagata 60
tgccccacac ggttgatata aacttcttgg ttggatctgg ccagatgtct caggagacgg 120
agacattgat ggagattatc tccaggaggg acctaaggga gattctctgt gcttgcctga 180
aagcagttga agacaacgac accttaaaat ttgagtggtt aatatcagag ttacgcccga 240
tggtgtctgt ttccgggtgac ccgatccaac gattatcagc atacatgttg gaagggtcta 300
tagcaagatt ggcaagttcg ggaagctcta ttacaaagc tttaaaagtgc aaagagcctg 360
ctggtgcaga gctgctatcg tacatgcaca ttctctatga tatatgtcct tatttcaagt 420
ttgggtacat gtccggcgaac ggatcaatcg cagaagtcat gaaggacgaa aacattatcc 480
atataatcga ttttcagatt gctcaggagag gccagtggat caccctgatt caggtctctg 540
cagcac 546

<210> 270
<211> 283
<212> DNA
<213> *Eucalyptus grandis*

<400> 270
ccccatttcc cegtttctcc catattcctc aagcactctc atttagggaa tgaagtgtta 60
gaagccacct caagtttcaa atttttttcc tgcgcagttc tcaattcaaa tggcagctag 120
ctcatgtaat cagaaactga ggaagggttt atgggtcgcc ttgaagaagc agaactgttt 180
caattatata agtagacatg ggttgggatg ctggagttcg gttccgaagc tagctgggtt 240
gcagagatgt ggaagagatt gcagattgag gtggatcaac tat 283

<210> 271
<211> 377
<212> DNA
<213> *Eucalyptus grandis*

<400> 271
atttcttctc ggttcttgat agaagattga aggttctaga acaagaggaa gaaagctagt 60
gcaaaagaaa gaaagtaaaa agaggtattt ctgctgcttt attagtttat tgtggagtat 120
ggcaagtggg atggagaacc ggggggaaat tcctgcgaat ttgaagaaac agcttgcctct 180
ggctgtgaga aaaatccaat ggagctacgg aatcttctgg tccatctcaa ccagacagcc 240
tggggtcttg gagtgggggt atgggtacta caatggagac atcaaaaacca ggaatacaat 300
tcaagctgtg gaaacttaata ctgaccagat ttgattgcag agaagcgagc aactgagggg 360
actatgatga tctctat 377

<210> 272
<211> 548
<212> DNA
<213> *Eucalyptus grandis*

<400> 272
ggaatatcca gaggaatgag taccataatc tttttaactt catcagtgagg aaggggttga 60
agatcatgaa ctggggagag caggggcgctg atggagtacc aggcgttctt gatgtggatg 120
acgacgatgc tgtcgatccc catcttgagc gcatcaggat tgaagccggt gtagatgaaa 180
gtgatgaaga ggaatgaagt ttgttcattg ataaggatga tggaggatct cctactgatg 240
attctggaga tgacagctcc gatgtcagtg aaagtggaga tgagaaggag aaagagaagt 300
atgggaaaaa ggaactctga aaagaagtca aagcatcatc aagcaagaag aaagcaaaa 360
ctggagatga agaggggtcg aagaagaaga aacagaagaa gaaagacccc aatgcaccaa 420
aaaagctat gtctgggtat aactttttct tgacagcggg aagcgagaaa atgaagagaa 480
ctaactccgg tcttctctct ggggatgtat caagagaaat tgcagacaag tggaggggtt 540
tgtcagcg 548

<210> 273
 <211> 420
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 273
 tctctctctc tctctctgtg aagatcctct ctgacgataa atcactgttg cccatttctt 60
 ccttggtctc gtctctgtgc tctctctctc tctctctcag acttcaactg tgcgagccca 120
 aaatcgatc cttttctgct tctctttgcc tctgttccaa gaggcaatg atactgggtg 180
 gatctggtcg gcaacttttg ttggaagttt gaggaaatctg attgagagaa gaggtagatc 240
 taaaggatca aaaggatgtc atttaccggc acccaagtta aatgcaaggc ttgcgaaaag 300
 acagttatc ctgttgaaac gttatctgct gatgggttg cataccacaa gtattgtctc 360
 aagtgcagcc actgcaaaag cacattaaag ctgagcagct actcctcaat ggaaggagtt 420

<210> 274
 <211> 454
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 274
 gataaatcgt ctccaccagt acctccgcag gatcagacgg gtgttcatgt ttatcatcct 60
 gattgggctg ctatgcagtc atactatggt ccaagagttg ctcttccgcc ttattataat 120
 tctgctgtat catctgggtc tggctctcat ccttcatatg gggggccacc acagcctatg 180
 atgcccacat atggggcacc ttatgtctga atatactcac atggaggtgt ttatggacat 240
 cctgcaatc ctcttactcc gactcccttg gctgcggaaa ctctcaaaaa gtcatctgct 300
 aattctgata attgactggt gaagaagttg aaaaagtttg aaggccttg aatgtcaata 360
 ggcagtgagg gggatgcaga cagtgcctgac gatgggactg ataaaaggtc atcacagagt 420
 gcagactcgg gagactcaag tgatgaggat caat 454

<210> 275
 <211> 620
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 275
 gcgattttaa cagctactgg aggaggcatc acaggatatt gatcacacaa ctgactatta 60
 cacttttaga aagaatagg gcaatgatcc acgglttgag gccttggaat ggaagatcg 120
 agagaattta ttgaatgaaa gggctctccc tttaaaaaag gctgctgaag aaagggtcga 180
 agcaatgcgt gctgctgcca ctcttagttt taaatccttg ctctcgagata gaggagatat 240
 aactgtcaat tcccgttggt ccagggtaaa ggtatgctc agggatgacc caagatacaa 300
 gtcagtgaag catgaagaca gggaggcctt gttcaatgag tatatagctg aattgaaggc 360
 tgtggaagac agagaagaaa aggaggcaca agctaagagg gaagagcagg gaagctgaa 420
 ggaagggaaa agagaatttg gaaaacggaa ggaagagaaa gaacaagaaa tggagaggg 480
 acgagtgaaa atacgcagga aaggaggcaat tgcattcttt caagcattgc ttgttgaaac 540
 aatcaaggac cctcagcttc ctggacagag tcaaaagtta aacttgacaa agatcctcag 600
 gacgtgcgag taatcctgat 620

<210> 276
 <211> 340
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 276
 gagaataaga actactggaa tacaagaatt aagcgactgc aacgcactgg catgcctata 60
 tatccaactg aggtttgtct gcaagtgtca agtgagaatc aagaaactca taacatgggt 120
 aacttgcata ctgcaggcga agataattgt gatctctcac aggcagatcc actcgagatc 180
 ccagaggttg attttgaaa actggaactg catcttgggt tctcgtcttt ttggtctaca 240
 ctctggacg tctctccttg tggctttggg agagaggcaa tgtgtctatc tgatgcttac 300
 tgccttccat ttcatacaag ccggtctcct aaacgccttc 340

<210> 277
 <211> 351
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 277
 cgagcaccgc caccacccgt gccaatctgg aggcactatt tgacaaccat aacatggctc 60
 gaatacggga cgtatgggcc ccgaatcttg agatagagat gcagaacatc cgcgaggcca 120
 tcgagaataa ctcgtagttt tcaatggaca ccgagttcct gagtggggcg cggcccatag 180
 gtaactctaa aacgtcctcg gactaccact accagacgat gcgctgtaac gtcgaccttc 240
 tcaagatcat ccaagtcggg atcacgctgg cagacgagga ggggttgctc ccgaggact 300
 gctctactgg gcaagttcaa ctttaaatat agtctttggc gacgacatgt c 351

<210> 278
 <211> 337
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 278
 gcagccgagc cgagcaagaa actaacgaac gcccggtgtc attaggattc ataatccaca 60
 agaacaagaag aaaaaaggat catgggaaga tccccatgtt gcgaaggcaa tggcctgaag 120
 aaagggccct ggtctcttga ggaagacaag aagctccttg attttatcca gcagcagcggc 180
 catggggatc ggatctctct cctaaaagct gcaggtctta atagatgtgg caagagctgc 240
 agattgagat ggataaacta ctgtggcccg gacatcaaga gaggggagttt ctccccggaa 300
 gaagaacaaa ccatcttgca tctccactcc gtgctcg 337

<210> 279
 <211> 383
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 279
 ctccaaecgc cgccttcttc tcctggactc ctctgagctc tctccatctc ctccggctcg 60
 gcgcggccgt cgcctcgacgc cgacgactcg aggggtttcca tataattcac ttgaaagaag 120
 ctgcagaatg ccgtggaaaa caggacttac cggctctaata acggaagaag ataaggctct 180
 gcagctttgt cgggagagaaa aaaaatctgt taggcaagct gttgatggtt ggggctccct 240
 tgtgtatgca catttcatgt ttgtgcaatc attaaggaaac gtaggagacg ctctccacaaa 300
 gttctttgaa acagaatctc caaatgggtc tccctcgtat gcctcaatga gtacaacacc 360
 tgagccaatc gcattaaccg aga 383

<210> 280
 <211> 312
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 280
 ggtttgctca gatgcagcaa gagctgcagg ctccagatgga ctaattacct cgcgtccgggt 60
 atcaagcgcg gtatgcttcac ggaccaagag gaaaagatga tctgtccacct caaggctctt 120
 ctgtgttaata gggggggcgc catagcttcg taccttccct agaggactga caatgatatc 180
 aagaactact ggaataccca ttgaaagaag aagctgaaga agcttcaagg ccaagcaaat 240
 cctgatgatg atgaccataa tcatcaccca caaggggtta acgcaacttc acactccaac 300
 cccaagggcg ag 312

<210> 281
 <211> 311
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 281
 gagatggcga ggacaccatg ctgtgagaag atggggatga agaaagggcc gtggactcca 60
 gaggaagacc agatcctgat ctcccacatc caccagtttg gtcaactcaaa ctggcggtgca 120

cttcctagac	aagcaggtct	gttaagatgt	gggaagagtt	gcagactccg	gtggataaac	180
tacttcgcag	ccgacgtgaa	gcgaggggaa	ttcaccgcag	acgaaagaga	caccatcatt	240
gaacttcctc	aagttcttgg	caacagatgg	tccggccatag	cctcgagatt	gccggggcga	300
acggacaatg	a					311

<210> 282

<211> 378

<212> DNA

<213> *Eucalyptus grandis*

<400> 282

catggacagc	tgaagaggag	aagaagctca	tcaacttcat	cctcacccat	ggccaatgct	60
gttggcgggc	tggtcccaag	cttgctggag	tgctgcggtg	tggaaagagt	tgccaggtga	120
gggtgaccaa	ttacctgagg	ccagacttga	agagaggcct	tttgtccgag	tatgaagaga	180
aaatggtcat	tgacctccat	gcgcaacttg	gcaacagatg	gtcgaaaata	gcctctcacc	240
tcccggaag	aacagacat	gagatcaaga	atcactggaa	cactcacatc	aagaagaagc	300
tcaagaagat	gggcattgat	cctctcactc	acaagccatt	agtcaccaac	aacgacaaca	360
caaccgatca	acaacccc					378

<210> 283

<211> 389

<212> DNA

<213> *Eucalyptus grandis*

<400> 283

ctccctctc	ctccaaacgt	ttccgtttct	ctccaagctg	aacatggaca	agaagccaga	60
cgacgacagt	ggtaagtccc	aagatgtcga	ggtagagaaa	ggcccggtga	cgatggaaga	120
ggatctctat	ctcatcaact	acatagcgaa	tcacggcgaa	ggcagttgga	actccctagc	180
caaagctgct	ggctctaaaa	gtaccgggaa	gagtttgtcg	ctccggtggc	tgaactatct	240
gcgaccgcag	gtccggagag	gcaacatcac	tactgaggag	cagctcctga	tcattggaact	300
gcattgccaa	tggggaaaca	ggtgagatgc	acataagtca	cacaactttt	cgttacatag	360
gtttctacaac	ataataccca	tcgatcata				389

<210> 284

<211> 385

<212> DNA

<213> *Eucalyptus grandis*

<400> 284

ccaatggtga	cagtggttaag	gatgaccttg	atacagatga	atatgaaact	catgccacag	60
ttttggataa	gctattagca	tgggagaaaa	agctctacga	agaagtgaag	caaggtgagc	120
acatgaagct	agagtatcga	aaaaaggtgg	ctttgtctaaa	caagcagaag	aaacgtggtg	180
cttggttgat	atccctggag	aaaacaaaaa	cagctgttaag	tcattttgcat	acgacataca	240
tagttgacat	gcagtgccat	gattcaactg	cttcagaaaat	aaaccacata	aggggacaaac	300
agctgtaccc	aaagctgtgc	caactgtgtg	atgggatggc	gaatatgtgg	gaaaaaatgc	360
gcattgcatca	tgataagcag	gagtc				385

<210> 285

<211> 461

<212> DNA

<213> *Eucalyptus grandis*

<400> 285

caccgaaac	agtccatggt	cagaattatt	ctccaattca	tcaaatgggc	attgatggat	60
tctttccagc	gcattccctcc	ccacagaatc	cttcgtacca	ttcttactcc	cccaacaata	120
gacccaattt	ccctctcccg	tccctcaaaa	cttcacagtg	ggactatttt	tggaaacccct	180
tttctaccc	ggactactat	ggatacccca	ctcggagtag	tattgatcat	atggctatgg	240
atgatgagac	cagaggatgt	agggcaggtc	gagagggaaga	ggggattcca	gacttggaa	300
aagaaactga	gcacgaagaa	tgtgatcacc	actcgatgt	tgatgaagat	agaggcaaca	360
gagatgctaa	tttcccccact	gagggaagtt	tagtgggaaga	tgttgatgac	gagggaagag	420
atgaggatga	aggaaacaga	cacagctgtg	aactctgagga	t		461

<210> 286
 <211> 438
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 286
 gtactcgggg ctacagctgat ggaattgacc gacagggctgc ggtccttgaa ttcagtgctt 60
 caggtcgtgg aggttggttag cgggctcgcc atcgatatac ccgagatacc tgatccgctt 120
 atgaacecat ggacagctgcc ctgcccagatg cagccaatta cggcgctctgc cgacatgttg 180
 cagctgtgag catcagattg gaagtgtaaa agttggggct gattcttttg gaggccctt 240
 ctggggggat ggtagatcca tagccatttg ctgcttttgt ttttcttgtc aatccgctt 300
 tctttcttga agttggaact ccaatatctg tatgcgtctg tctagatgga ctggcgctt 360
 tatgtctgtg tgacattgta cttagctgtt ctgtctgtt acttatggga tgttctgtt 420
 ctaaaaaaaa aaaaaaaa 438

<210> 287
 <211> 405
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 287
 ctgaccttaa cagctgcaag cactgttata tttgcagagc tatcgtggag accgggtgat 60
 ctgatccaag ctaagatcgc tgctcacagg attggtcagg tatcttcagt taatatatat 120
 taactctgag caaatgacac tgttgatgac ataatatggg atgttgcca gagcaagttg 180
 gaaaatttgg gtcaggtgct tgatggccat gaaaatacat tggaaagctc agccagccaa 240
 ccaactagaa acagccctgc aaagcaaaaa acctttaata gccctggcaa acagcataca 300
 tttaatagcc ctgggaagca gcaaaaattt aatagccctg gcaagcagac aacactcgac 360
 tcggtcatga agcgttgcaa tagtggtgac ccctctgaac atcag 405

<210> 288
 <211> 515
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 288
 ccctcttctc ctctctctcc ctctctctgt cgcagagctc cgtctgaaat cgcagaatcc 60
 acgcgcagag cgaccacaaga gtgtttcaga acagtccgtc catggccttg gaagctatca 120
 actctcccaac cgcggcctca gcgcgcgttc agttcatgga ggagcccttg agctcccgct 180
 tcttgagacc cctgaacaag cgaacgcgtt ccaagcgccc ccaccaacct cctccgaag 240
 atgagtacct cgcctctcgc ctcatcatgc tcgcccgag cggcgccgcc cccaagccca 300
 accaccaagc ctgcgcgctt cctctctctc ctctctctcc tctctgcgcc actaagcctg 360
 aagaagcaac ggcgaccgac acggcaaccg cggcccgccg gaataaactg agctacaagt 420
 gcgcgcctg cggcaagggc ttccctcct accaagccct cggcgccacc aaggccagcc 480
 accgcaagtc ggccgcccgc gccgcgcgcg ccgcc 515

<210> 289
 <211> 375
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 289
 ggcaattgct ctgtctctag ccaaacggga aatcatccgt agcataggca ctggattgga 60
 ctggtctctca ccttcggcag gttcatcgac gaaattaaag gaacccttgt 120
 catatgtcct gtgggtgtgtg tgaactcaat ggttggtgag attaatgtct ccatgcccc 180
 aggaagcaact aaggtcctag tatatcatgg agcaaataga ggaagactg ctgatcagtt 240
 caagaacttt gattttgttg taaccacata ttactctgtt gaaggcgagt acagaaaaat 300
 tgtgatgcca cccaagaaga agtgcatatta ttgtgggaag ttgctttaca aggagaaaa 360
 gacagttcac 375

<210> 290

<211> 590
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 290
 cccagattta ccaggagatg acttagcatt ggaattcgag gaattcgatt tccagagcct 60
 gttcgacgaa ttatcgctcg atgccgcggg ccttctcgac gccagcgatg tccagctctc 120
 gtctccggga tgcgtgtctc cgtggatcgg cgagatcgag gccatgctga tgaaggacga 180
 cgaggagacc gtccgcgtcg agccgagtcga ggaggtcttc gatcgcttct tgcgcggctt 240
 gctcgttgat tcccccgagg gcggaccggc cgaggcgacc gacggcgaga gcgacaagga 300
 gtccaattca tccgacggcg gcggcgccgg cggcgcgcaa cgggatgaga agctggctcg 360
 cggagataac gagcttcccg aggacgctga tgatgatgat cccgtctcta agaaacagag 420
 aaggcagctc aggaataaagg atgcggcgcc taggtcgagg gagagggaaga gaagttacgt 480
 gaaagagctg gagatgaaga gcaaatatat ggaaggggaa tgccgcaggg tggggcggggt 540
 gctccagctg tttgtggctg agaatacaag tctgcgtctg aatttggaga 590

<210> 291
 <211> 307
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 291
 gtgatttcga gtcagagcat gcaccttgga gttcttgcaa ctgcctccca tgcgtgtcaca 60
 actcaaaact tggttgtagt ttattacaag ccaaggacta gtcaattcat cataagcttg 120
 aacaaatatt tggaggctct taacaataaa ttccacagtg gaatgagatt caagatgaga 180
 tttgagggtg aggattctcc agagagaagg tttcttggtt caattgttgg ggtggaagat 240
 ttctcaccct aatgggataa ttcaagttgg cgatcattga aggttcaact ggacgaacat 300
 cgtcat 307

<210> 292
 <211> 209
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 292
 gttcaatcag ctgcagccga ggatcaacag gaagcccttc agcaggagaag aggaagagag 60
 gctcttgact gcacacaagc tgtgtggcaa taaatgggac atgatcgctc ggctcttccc 120
 cggccgagcg gacaacgcgg taaagaacca ctggcacgtg atcgctcgca ggaagcagag 180
 agagcagctc aacaacgcc gcggccgga 209

<210> 293
 <211> 224
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 293
 ctccagaagta cttcatcagg caatctaacy tgtcaaaagaaa aaacagcgt tccagctctgt 60
 ttgatattgt ggcagaggaa tccgttgatg tgccaatggg atcaagggac ttcttttcgg 120
 tcgacgagca acagcaggaa acagaagtaa atgatgcctt gcagcagctg ccacctgatg 180
 ttgtgaaga atgtgaatct atggactcca ccaactcaaa tact 224

<210> 294
 <211> 185
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 294
 ttctcttctc tctagacatg aatctcgaca tccaatccct cttctaacca atgggcagcc 60
 gatgtctggt gaaatccctc gtgctagtat tgacagccca tctgttagga ctacatctgg 120
 acctctgggt ctttttgata aacatgtgca ctgccttccc tatgttgatc ccagacagcc 180
 agttc 185

<210> 295
 <211> 428
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 295
 tcagcccgcc cctctccgcc cacgtggcca gccacaagg gctccatcaa gcgagcaagc 60
 ccaagatcca cgagtgcaac atatgtgggt ccgagttcgc gtcgggtcag gccttgggcg 120
 gccacatgag gcggcaccag tccgcccgcg ccgcgcaggg caccagcgcc gaacgcgagca 180
 gccccaccaa ccgcgcggct gctgcggcca tcaccaccga gaagtccgcg aaatcctct 240
 ccttggaact gaacctggcg gccccgaacg gagggagatc accaccacca agcgcaccgc 300
 cgccgggaga actcgaagtt ccaattcgcc acaagtcaac agcccatcat actagcctcg 360
 ccgcctctgg tggattgcca ctactgaaaa aaaaagaaaa gacgggttca catgtcaatc 420
 aatgtaac 428

<210> 296
 <211> 418
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 296
 gcagtttcgg atattaattt ggtttccaat agcacacata gttcatagca agatggggga 60
 agcccccgga gaattacatc agaaagtgc cctaaagatg ctccaatggg aactgagagc 120
 cttttaagtg cacctgaagc agtagagctt tcagatcacag ggacttcctt caggttcaag 180
 atggattcat ctatgcaaa gaaaccacca gtatgataaa gcccaaggat gcattcgttg 240
 cccatgaatc taactactga agaggagat aacaatgttt cgtgccaaact aaatctatct 300
 ctctgcattt ctctactgca agttgaccac agtcaacaat tcaatcggtt gaattgtcta 360
 ggttcagaaa ctagcaagtc tccagatgca aggtcaaatg ccagcatcac agaattctg 418

<210> 297
 <211> 250
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 297
 tgcaccacga gtataactcg agtccagtgg gttacatgga gaccaacaag gctcgtttgg 60
 ttgttgagaa ggacgactta ggggtgaatc ttatgcctcc ttgcacttgg taaggttctt 120
 ggcgatgatt atgatatgat gatcagtttt tctctgatta tttaagaag ctgaggctga 180
 gggttcttgt cttttttttt tctttttttt tatttttgaa gagggtttct tttctctatt 240
 tccccccca 250

<210> 298
 <211> 626
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 298
 agaacatagg tgcgaaggcc gatgtgttcc acatactctc tggcatgtgg aagacgccg 60
 ccgagagggt tttcatgtgg ttggcggtt tccgttcac tgaaacttctc aagatactag 120
 ggaaccacct ggagcctttg acggatcaac agttgatggg catatgtaat ctgcagcaat 180
 cttcacacca ggctgaagat gctttatctc aggggaatgga agctctgcag caatctctcg 240
 tggacacact ttcttcgacc acaactgagt ctaactggtt agggcaacgtc gcagaataca 300
 tgggccaaat ggctatttgc atggggaagt tggccaactc cgaaaaactc gttcaccagg 360
 ctgacctctt gagacagcag acgctccaac agatgcactg gatattaacc acccgccaag 420
 agcccgccgc tttctctgtc atcaatgaat acatctcacg tctccgagct ctgaattcat 480
 tatgggttagc tcgtcctagg actgaaaaa cttgttctgc taaactcttc tgatgtaatc 540
 gatagttttg attgaaatta acgtttctag tggggatcca tttactcgga ctgtagcgat 600
 tcgggccaca tttatataaa agctat 626

<210> 299

<211> 438
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 299
 aaagaagaga ctaatggctg catctgcatt cggagaggac gagaagacgg gtcgtcaaac 60
 cgcctaaag gtggaggact tgaactactt gtttatggcg tgattcggaa ggtctaattt 120
 tgcggatcgc aacacatcat ttaactaacct tagtgctgcc tggtagagtt tggttctgagt 180
 agcggcagcg gccttatact tagtgatttc gacagagcgc attggctgga gattgatcaa 240
 ctttctcgtc tcaccattat ttgttactgt acagcgcgcg acagatagca acatctaaca 300
 gtaaagatgc aatttttttt tccctgaaa atgtaaatga tatagggttt ttgttctatc 360
 tctgtgctct cctccattcc ttatttgtat acggagatca caaacttgag gtcagtgaat 420
 ttgataatta tgtcttgc 438

<210> 300
 <211> 345
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 300
 ctctcgttgc cgttctccgt ctcactcttc cttttgccgg tgggtttccg gtcgagatag 60
 cggaggggtc ctgattcaga gggcggcgcc ggcagcgacg acgaggagga gctccgacct 120
 cgaagcgctt cggctcgatt cctcctctgc ggtcgcgcgt gtcgacgga cgagtcggtt 180
 ttggcgggga gatgagagat ctgtgcctcg accagagaga aatggcgctg gggagctcca 240
 gggctcaggg ccgagctgat cgggagatgg cgtctctcaa cgagctctgg caagcctgcg 300
 ctggtcctct cgtcgcgcgt cctcgtcaag gcgagcgtgt cttct 345

<210> 301
 <211> 454
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 301
 catattttca tgcgtctaag ccccgctcct tggcctgcat ccatggccaa tcagccaccc 60
 ggtgagcccc aaccaaacc gccacgcgca cgcgccagac cccacgcat ccaaatccct 120
 gaccacccac cgcataattc gccttcttct tcttcttctt cttctcttcc ttcttcttca 180
 ttggccacca cgggtgatcg gggcgggttc tcgcctagac cgatgcttcc tcgcgagcgg 240
 tcgtcgcgcg tggctcaatc cacaggaggg caccgccttt accgtggagt ccggtccccg 300
 agcgggaagt gggctctcca gatccgcgag ccccgcaaga ccaaccgcct ttggcttggg 360
 acataccgaa atcccgagat ggcgcgcgcc gcctttgacg tggcgcgcgt ggtcttgaaa 420
 ggtcccgacg ccgcccgtgaa cttcccccat gatg 454

<210> 302
 <211> 286
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 302
 tttcccgcaa gggcacatgg aacagctgga ggcacgcaca aatcaggaa tgaatcagag 60
 gattccgctc ttcaacctca cttccaaaat tctttgccag gtcgtgaaag tccagctcct 120
 ggcgcgagcaa gaaacggatg aggtttatgc acagattact ctaattccag cgggaaatct 180
 aatggagcctt acaagtcccg atccagcttc tgcggaaact ccaagaacaa gaggttcatag 240
 tttctgcaag gttctaactc cctctgatac cagcacacac ggtggc 286

<210> 303
 <211> 513
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 303
 cagaggacaa ggtaaaaaag gggcagccct ctgctctgtc tgaattgcg tctctcccta 60

cttctctggg	cttctttttt	tttgcctccc	ttccttaaac	tctccctctc	cccgtttctt	120
gtctggtttt	tctgggtgct	ctcgcttttc	gctgctgaag	gagtgagttt	gaccgctggg	180
ttcctttctt	gatccctcaa	ttegatcgtc	agctcctcgt	gtcgactttt	ttcggttttc	240
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acttcagcac	cgatccgacg	ccgacgaata	acaggcctcc	tggcaacacg	ctgttaaacc	360
ggcaaccgtc	ggtgtacacg	ctgacctttg	aggagttcca	gaactctata	ggcaaggagc	420
ttgggtccat	gaacatggat	gagctcataa	agaacatttg	gtctgcagag	gagaaccaat	480
ctatggcatc	tgctagtgcc	gcttgggtg	gcg			513

<210> 304

<211> 370

<212> DNA

<213> *Eucalyptus grandis*

<400> 304

ggcgattgca	tgcttcccat	gtgtagcatg	gtgtcagatt	tttgaactgt	taattgcatg	60
tgcccgcaatc	ttcatttcta	tcaattgagc	acttcaacag	gctttttcta	gtgggaagaa	120
gtctccaaaca	aacatgacat	aggggatatt	ctggaaatag	ttatgaaaga	ggagaccgcc	180
tttctaataa	ggaacttcca	tgcaggcatg	tggatcgtag	gaatattctg	agcaatacca	240
tgatgaagtt	aagccagcat	atggacctca	gatatcgcca	cattctcagt	atctcgggta	300
caatttcttg	agattggggg	tgctctccag	agtggcgagg	gaacctgttt	atgtgaatgc	360
caagcagtag						370

<210> 305

<211> 503

<212> DNA

<213> *Eucalyptus grandis*

<400> 305

gcccgatgtc	ccccctcccc	ccccgcgcg	agacgtgacc	gatgccgagt	gggttctacgt	60
catgtctctg	accgcctctt	tctcgccggg	agacggtatt	cccggaagg	ccctcagcac	120
ggggtccttg	gtctggctga	ccggtgctcg	cgagcttgag	tcgtacaagt	gcgaccgggc	180
caaggaggcc	gagctccatg	cgatccgcac	catggtttgc	atccccactg	gtgatggagt	240
ccttgaattg	gggtcttgct	atgtgatccc	tgaaaaactg	ggccttgttc	acagagccaa	300
gtctcttttc	ggctccgac	tgctccttcc	caagaccgcg	ccaccgccac	cacctccgtt	360
ccagctccac	catgaccata	cgacatttcc	tttcgctgac	attggaataa	ttgcggcggt	420
tcaagagaat	gatttcgctc	ctcacgatga	ccacgagaag	aaggtcaaga	agaagcagcc	480
gctggtggaa	ggagctggcg	gga				503

<210> 306

<211> 377

<212> DNA

<213> *Eucalyptus grandis*

<400> 306

atgtcgctgg	aatgacgcga	ggccgtcgtg	acggcattct	gaagagcgag	aagacgcgac	60
atgtcgtcaa	gattggcccc	atgcatttga	agggcggtgtg	gatcccttac	gacggggtc	120
tcgagtttgc	caaccgggaa	aagatcaccc	agtatctcta	cccgtctgtt	gtgcatgaca	180
ttggcgcgct	gctctatcat	ccgagcaacc	ccagcgccgc	caccagccgt	gcgggcaacg	240
cgcaagaacac	gcttgccgcc	atcgatcgct	gcaggaaacga	ggcgcgcatg	gcgggcaacg	300
tcaggggga	ggcggtgacg	ggagtattgg	tctctcccg	gcgccagacc	gcaggcgcc	360
gaccacgcgt	cgaccgc					377

<210> 307

<211> 361

<212> DNA

<213> *Eucalyptus grandis*

<400> 307

aataatctct	ctctctatga	caatggagtg	ggtagtagac	cacgccccag	gtcaaatgct	60
gaacagttaa	ttttccgagc	ggcattgcag	gatctctctc	agccaaaatc	agaagaaatc	120

ccacctgacg	gtgctctggc	agtacctctt	ttgaggcatc	agaaaaatgc	cttgtcatgg	180
atgggtgaaa	agggaaacgc	cataaatgct	tgtgggggaa	ttcttgcgga	tgatcaggga	240
ctagggaaga	cagtatcaac	tattgtctct	atacttaagg	aaagacctcc	aaacctcaaa	300
caatgtcagg	agaatccaaa	gcaggagtta	caaatctttg	atttggatga	ggatgaaaat	360
g						361

<210> 308
 <211> 357
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 308	
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aggctttgtt	ttgggacctg ggtttgtgtc gatttggtcgt ttttgtgaac tcccgaaatg 180
tgatgtcgtt	gtcggccaaag agcagatcga ttcaaatctg ggacgtgtgg gatgataacc 240
tcgacgagga	attcgcgcga atccgcgaga tctgtcgacga ttatcgtac gtggccatgg 300
acaccgagtt	cccgggtatc gtctgtcgcc ctgtggggcaa cttcaagaac tccagtg 357

<210> 309
 <211> 433
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 309		
ccgggtctct	ctttcttcca aagtaaaact aactcttctc ttcctcccca ccggcaagaa 60	
aaagtctccc	gatcctctct cgcattctcc ggctctcgcc tccggctgaa ttgtcgactg 120	
tccggctcgc	tccggcgccc actggaggcc atggcggatt cggacaaacga ctccggggggc 180	
cacaacaacg	cgaacagcga tctcggcgcc gcgctcgccc gcgagcagga ccggttcttc 240	
ccgatcgcca	acgtcagccg gatcatgaag aaggcgctcc ccgccaacgc caagatatcc 300	
aaggaggcca	aggagacctg gcaggagtgc gtgtcggagt tcatagcctt cataacgggg 360	
gaggcgtcgg	acggcagcag cagcatcgcc ggccggcgcc gggggcgctg gaacagcggc 420	
gggggctccg	cgg	433

<210> 310
 <211> 511
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 310		
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acttctgtcaa	gaatataaag aggagatgca aattcagtga gcatagaaaa acatcgagta 120	
gtactgtcac	ctctgattac cagaaagctg ggaactcaac acgcttaaga 180	
agggccagga	agtgttgaag accagatccc ttaactaaag agaagagcgg aagagcttcc 240	
agcatgaagt	tgagcaagtc gcagagcggg tctcgccatgc tgagtgcagg aaccagcaga 300	
tattctctct	cctcacaaaa gcagccaaaa gccccaactt tgtccatcat ttaatccaga 360	
agaagagcca	gaagagagat tttagaactt gtgaatcaag caagaagagc aaattgcttg 420	
gttccgatgt	tgaagccacc aaattcttga atgaagcaat ggatcacatg attaaaagcc 480	
caaacgttga	ttgcctgaga atcagtgatg a	511

<210> 311
 <211> 799
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 311	
ggaattcttg	cagctgcagc tcatgtctgg gcgaacaaca gccctttcac tatattttac 60
aatccgaggg	caagctcttc tgaattctgt atcccccttg taaagtacaa taaagcattt 120
tatactcaag	tttctcttgg catgagattc agaattgatg ttgagaccga ggagtcggga 180
gtccgaagat	acatgggtac aatcaactgga attagtgtat tggattctgt gagatggaaa 240
aactccagtt	ggcgcaatct ccaggtgggg tgggacgagt gcagacgcgg tgaacgacca 300

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agcagagattt caatgtggga aatagagcct gttgtaactc ctttttacat atgtccacct 360
cctttttttt ggcaccaagt tcctaggcaa cctgatgatg agtcctgatg agaaaaatgct 420
ttcaagaggg ccatgccttg gcttggagat gagtttggca tcaaggacac gccataactca 480
atctcccttg gcttgagatt gatgcagtg atgagcatgc agcagagtaa tccacttcaa 540
gccactcaat ctggacttct accctcaaat ctttcttcca ctgggtttaca caataacctt 600
ggcatcgagc accctcccaa attgctaagt ttccaagccc ccaccaaggg tcttcaattt 660
aataaaacga atccacaaaa tcaagtcagt caattgctgc aaccgtctat ggcttggctt 720
caacagcacc agcttcagca actgttgtag aatcctctgg gccaccagca gcagcagcag 780
cagcagcagc tgcagcgcc

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<210> 312

<211> 304

<212> DNA

<213> *Eucalyptus grandis*

<400> 312

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gaattcttttca ggttccagaaa ggtcttgcga acttgggttt tggcactctt 120
tacgatggta tcgaaactca aagtcacatg ctatctgaag tggaggagga tcatctgat 180
gattcagggt gttctgaagc tgctgccacc agaaatggca tcacaaacct atccgtgaat 240
gctagtgtca cttacaaagg catgggcttt ggccaattct tccggtttcg tgaggtcttg 300
caag

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<210> 313

<211> 427

<212> DNA

<213> *Eucalyptus grandis*

<400> 313

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ccccctcttc ccttctgccc tccgccctcg atccccaaaa ccttctctcg aatcgattcc 60
ggcagccccc tccggccacc gccccctccc gccgcaatgg acgcagcgcc gccggggggc 120
ggcggaggcc gagggcgccc gccgcgcttc ctctgaaga cctacgagat ggtggacgac 180
ggcgggacgg acgagatcgt ggcgtggagc tcgggcaaga cgagcttcgt cgtctggaac 240
cgcccgaggt tgcgccgccc cctgctcccc acctatttca agcacaacaa cttctccagc 300
ttcatccggc agctcaacac ctacggatc cgaataattg atcctgagcg atgggagttt 360
gctaataag aatttggtaa ggacaaaaaa catcttctca aaaacatcca ccgtagaaaa 420
ccatcc

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<210> 314

<211> 308

<212> DNA

<213> *Eucalyptus grandis*

<400> 314

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agcagaatgt acgtgttggg ggggtgtaact ccttgcatac aatctatgca gttacaagct 120
ggagacactg taactttatg ccgcatggac cctgaagcga aacttataat ggggttccgg 180
aaagcatcaa cctctatgat gcaggacagc caactagctg ctgtttctaa cggtaaccat 240
tcaagtgaag ctttgatttc tgggtgggtt gaaaatgtac ctatgataag tgggtattcg 300
agtcctc

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<210> 315

<211> 92

<212> DNA

<213> *Eucalyptus grandis*

<400> 315

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agaactggaa aggcgtgaac agagtgtctt tgtccccgta atagtgggct gctggatgcg 60
ttagttcacg agtcgaagac tatgagcagt gc

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<210> 316

<211> 764
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 316
 agagagacga ccggacggtg gaaaagagag agagagagag agagagagag agagaagatt 60
 gcgatgtagc cggcgacgat cctagaatct gaagctgcgc agcctaggcc gtcgattttc 120
 ttaagccgct tcttgggtgct gctgttgccg ttgctgttgg tgggtggtgtg gctgctgctg 180
 ctgcagtgat tgctttctcc agctttttct gtggcggaat agagctgcag ctgctcgggg 240
 gctcgtctgc tcccgtctgt ccttccctcc ccccgctccc tgagttaggtg tgcgggaagt 300
 ttccggcggt ccgtctgcgc accacggatc gacgagaggg cgcgctccgt cttcgattc 360
 gggacgcccgg ggatatggct tctcacgagg tctccgtcgt ggggagcgac cggaggggaga 420
 gggagaggac gggctgcgag gacgccttct acaaggagct gtggcacgct tgcgcgggtc 480
 ctctggtgac ggttctctgc gaaggggagc tggtttatta cttcccgacg ggcatacgga 540
 cgagattgag gcgtcgatga atcaagtgcg cgatcgcgag ataccgtttt acaatcttcc 600
 ctcaaaagatt ctctgcgctg tcattaatgt tcaattgagg gctgaaccag agaccgatga 660
 gctgtttgct caagtgcatt tgcttccggt gcctaaccac gatgagactg ctgtggagaa 720
 ggaaactggg atccccctgc tccaacgacc ccgtgtccat tect 764

<210> 317
 <211> 181
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 317
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 caggggctag aacagctcca acagtcactc gtgcgaccca ttgcccggcg gcccgacatc 120
 gaaggaatgc aacagatggc aatcgccctt ggcaaaattaa ccaatctcga aggccttgtt 180
 c 181

<210> 318
 <211> 420
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 318
 ctattggtta tcccaagatg ccgttacagg cttcaatttc tacacagtcg gacttccaag 60
 ctgatggttc tggctatggg gtgccaatac cacaagggtg agatagtggg tcattaggca 120
 tttccgectt acccaccata caaagagatt cggggtgtgca tggtaagcaa acaacaagtg 180
 agtcacgcag ggaggattca gatgatgaag aatttggaagg tgacacggga accactgaaa 240
 acaaaagatcc tgctgaagtc agacgcgcca gaaggatgca gtcaaatcgg gactcagcta 300
 ggcgatccag aagaagaaaa caggagcaca tgagtgaact tgaaaaccag gttgagcaca 360
 ctggactact gaagcgtctc actgatatga accaaaagta tgatgtagca tcagttgaca 420

<210> 319
 <211> 462
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 319
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 gaggttcagc ctaaggtggc tgaattacct gagggcgagc ataaagcatg gaggtttcac 120
 tgaggaggag gatcacgtca ctcgcactct ttctcttacc ataggaagca ggtggtcggt 180
 aattgcttcc aaattgcccag gaaggacaga taatgatgtg aagaactact ggaacaccaa 240
 gctgaagaag aagctaattg agcaactggc ttctctgaaa acagtgcctt aaagttaact 300
 tgactatcag gtctgcgcac agaactcgcc ctcaactgat cctgagacca agaactcgga 360
 atatgtctgt aattcaatgg gattcccaa gcagaaactt aatccaggaa taccacttcc 420
 gaactcgagt cttctctgtc ctccaagctc cactgaagtt tc 462

<210> 320
 <211> 445

<212> DNA

<213> *Eucalyptus grandis*

<400> 320

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caagcattttt	gtcaaaagaa	ctcctttgtt	ttttctctct	ttctctctcg	accatggccc	120
gaccgcagca	gcgatcgct	ggcgtgcgc	agaggcattg	gggctctcgg	gtctctgaaa	180
ttcgccacc	gttattgaaa	acaagaattt	ggctagggac	gtttgaaacg	gccgaggatg	240
cggtctgacg	ctatgacgag	gcggcaaggc	taatgtgcgg	gccgagggct	cggacaacct	300
tccettacaa	cccaaacatg	tctcagcttc	tctcgtcgaag	ctctctctcg	cgacattgac	360
agcaaaagct	caacagtgct	acatggcctc	gttgccagatg	accaagtctg	cattgcaagt	420
gcaagaacca	cagaaccacc	cagtt				445

<210> 321

<211> 350

<212> DNA

<213> *Eucalyptus grandis*

<400> 321

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ggatcgccac	ggcgcgggat	tctcgatgga	ggcgcgccgc	gcggcgccga	aggtggtggg	120
ggagggcgag	gagctcccca	agaccatcgt	gcggcgcggt	gtgaaaggaga	agctctcccg	180
gtgctccgac	gacggcgacg	tctctctcca	caaggacgcc	ctctctcgct	tctccgagag	240
cgcccgcatc	ttcatccact	acctctccgc	cacagcgaac	gacatattga	aagaatcgaa	300
gaggcaaac	atcaacgcgg	atgacgtgtt	gaaggcgctg	gaggagatgg		350

<210> 322

<211> 263

<212> DNA

<213> *Eucalyptus grandis*

<400> 322

tggcgatagc	cagttcatga	gcaaggccag	cttcgtgtgtg	ttgatagggt	ggagggtagt	60
cactgggtac	caattgggtg	ggaaaggatc	tgggtctctcg	cccaaacgtg	gcaagtagat	120
gctgtgtggg	ggatgcagct	agattcaatg	gatgacgatg	aggacctgac	tgttgcatag	180
atggagactc	cttaactggg	gaggcctgca	gggcccgat	ggtggtgtca	tttctcgcca	240
ggtcatcctg	ctgtggaagc	atg				263

<210> 323

<211> 893

<212> DNA

<213> *Eucalyptus grandis*

<400> 323

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ctctctcttca	ctctcttctca	caatccctgt	ctcgcgaaatt	tatggcgcta	cccgcacgac	120
agtcgcgttc	ttcctttgat	cactagcaaa	tgtacgaccg	aggattagca	acccaaaagc	180
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gaatgtagca	atgagcccgca	atctcatccg	gcagctgcag	gaccaaccac	ttcaagagtc	660
ttttcttgca	atlaactgtca	aaggaaagtt	ttcagctcac	aggcactcgg	tggccatcag	720
aacgcgcaca	agagagagag	gacctggcca	aagcggggca	tgaggatggg	catgttttct	780
tcacagagat	attccagctt	ggcgtctttg	cctttgcacg	ggtctccacc	tgtcagggat	840
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<210> 324

<211> 434
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 324
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 ctgaagaact tcatgtctgc gctacaagaa ttggaggaga agaagaagaa cgaagtgcac 120
 cctagctcga gcatcggttc gtggatgtgg aacctagtg ccgccaggga ggatgatgac 180
 tcgtgggagc tgaagaccct cgccgaagac actagcaaca ttatgggcgc aacctggcgc 240
 ccgaggtcct acacttgctc ttctgttaga agggaggttc ggtcgcccca agccctcgcc 300
 ggccacatga atgtccaccg cagagaccgt gctaaagctt accaatcaca attccggcgc 360
 ctggcggaacc aaaattctcc ttctgctctt tgctctctcc cgtctctctc gactctgcta 420
 ttcccgaatc aaga 434

<210> 325
 <211> 588
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 325
 cctagctgaa actattactc ccaactgggtc tctctctctc tctctctctc tctctcaaac 60
 atggctgaat tagattattg ccaaaacaaa agcagcccg gcgtgcgcgc caagcgctta 120
 aagctcttcg gcttcaacgt ctccgatgag gaagactcag ccgtcagcga ccccatctact 180
 gtgtggcgca acggcgggcg cgccggcgga ggcggcaagg ccacgccgtc gggctcgccg 240
 gaaggcagcg tcccggtggg gggcgccgcg acgagtgcca gtactctctgc 300
 agggaaattcg ccaactcgca ggcctcgggg ggccaccaga acgcgcacaa gaaggagagg 360
 cagcagctca agcgcgcccc gctgcacgac agccggaaag ccgcgctgtc gtgcgtctgc 420
 cggaacccca tcatctcgcc ctctgctacg ccgcgcaccc tgcgtggccac cgtggggcgc 480
 gtggtgggtg cggggggcgc gccacactcc ccgtcctggg ttacgtttcc gcgtggcgcc 540
 ccgcctcttc aagtgtcgca cggtgcggtg ttcacgacgc gccaggga 588

<210> 326
 <211> 417
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 326
 ggaacatcaa tcgaatccat ggcacatcag ctctctcagc gctaatacaca ggcagctcaa 60
 cctagagctc gcaacttgag catgttcacc atcctctgca tcatcaccag catcactcaa 120
 tctctctgca gttctctgca aagacaacaa gctttactca tgcaactctc gccaaaagaa 180
 gttctatagc tcgcaagcac ttgggggtca ccagaatgct cacaagctcg agcgaacctc 240
 agcgaagaag agcagggact tgtgtctctg cgcaaaaact cctgcggcga cctcgaatgg 300
 tcacatgta cggccatctt ttcaatctgt ggtttatgag aatcagccac gcttggccag 360
 gcatgttggg gatgatatga ggtatgctgg gactaatccg ctgtatggtt catcttg 417

<210> 327
 <211> 448
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 327
 cagctgtcgt cgggtggacag ggaagcgagg gt cctgaggt acagggagaa gaggaagaac 60
 cgcaagttcg agaagaccat cagggtacgcc tcgcggaagg cctacgcgca aaccggggcc 120
 cggatcaagg gcaggtttcgc gaagcgccgc gacatcgagg cggaggccga gcgatgttc 180
 ggggttcggg tctgtccctc ctctctgatgt catctgaagc gttggaaggc ctctctctct 240
 ctctctctca agagagaaat ttggggctct ttctctgtct ggttttctgc tgcgtctctt 300
 ctcttgagc gatatcagtc tgttttctgt atacagtagg agactgttgt gtgctccctg 360
 gatctcagc cgttgccctga tcttgaatgt tttatggtga attttcatgg aatttgatga 420
 tgcaaatgta agggaatttt gctgaaaa 448

<210> 328

<211> 673
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 328
 gagaggtccg tggagcgggtg aggaggacct caccctcgtc aattacattg ccaaccacgg 60
 cgaaggacgc tggaaactccc tcgccgcgag cgcaggtttg aaacggaccg gaaaagagtgg 120
 ccggctcgccg ttgctgaatt acctccgccg cgcaggttcgg cgcgggaaca taaccctcga 180
 agagcagctc ttgatctcgc agctccattc ccgctggggc aatcgatggt cgaagatcgc 240
 gcaacacttg ccgggcaagg ccgacaacga gatcaagaac tactggcgaa ccgsggtgca 300
 gaagcacgcg aagcagctca aatgtgacgt caacagcaag cagttcaagg acgcatgaa 360
 atacctcggg atgcgagggc tgggtcgagag gatccaagcc gccctccgct ctgtctcgac 420
 cgctactgtc gccgcgcggc ccatggcagc cccaccacca atggccacca ccgcagcatc 480
 caacatcgcg ggcatggctt tcgcccgccg cctggcgggg atggggcgcg acttcagggg 540
 cgggagagtg aatgtggcgc ccagctacag caccgccgag aactcctgca cgacggcgct 600
 ttccgactca ttccgtgcgc aggtctcacc cgtctcgagc cttaccgacc ttgaccaggt 660
 acctacccta tcc 673

<210> 329
 <211> 1008
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 329
 gttccaaagt cactcccttc ctcaagctac gattccagct ctccggaagg aggaagaaag 60
 tcgggaaatt caccggaaatc tctccgaccc atcaacgctc gggaaaggaaa ggcgcgacct 120
 ttgatccgcc ttttttttgt accgtccgat gagtctctgg cgcgactacg accacgcgcg 180
 cgcga ccgac ctctccgcct tctggccgac gccggccacc cccctccgcg ccggcgcggc 240
 gccgcgcgtc agtccaggat cgtcgagcg gccgtccag gccctgatcg agggggctcg 300
 cgggaaggag ggggaagaaag gggccggggg gccgcgcgcg gcgtggacct acaccatctt 360
 ctggcagctcc tcgcgcgact actccggccc cgtcctcggg tggggggatg ggtattacaa 420
 gggcgacggc agagccagga gcaggggctc cgcttgcctc caggccgagc aggaagcacc 480
 gaagaaggtc ctccgcgagc tcaattcgct gatttccggg gccccgcccg ccgacgacgc 540
 ggtcgaggag gaagtgaacg acacccagtg gttcttctgt gtctccatga cccagtcgtt 600
 gccgcggcgc gtcgggttgc ccggtcgggc ctacttcagc tccaatcccg cgtgggtcac 660
 gggggccgag aggttgggga attgcgggtg cgatagggcc cggcagcgcg agatcttcgc 720
 gttcgagacg atccgctcgc tccctgtttt gaacggtgtg gtccaactcg gttccaccga 780
 gccgatctac cagagctcgc atctgattag cggaaattag gggctgttca atttccatga 840
 atcggagatg ggatgcgggtg ttaggggttt gaatagcgag catgaccgcg cgtcgctttg 900
 gatctcgcat ccgccagta cgatggagat taacgatcgt cctatgacat ttcatagata 960
 gaaccgccgc tcgagcagtc ttaccgaaag ccccgccgag atctgcgc 1008

<210> 330
 <211> 384
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 330
 caaaacccac cctgataagt tcccagcaac atagagacac tcacagaaac actcgaaaaa 60
 aacctctttg ctgtctttca tgggtccgcc attcccgact gcagaaactgc ctctcaacga 120
 gaatgattcg caagacatgg tcatctacca tgaactgaac gaggccatgt ccaagaacaa 180
 ctctcccttc ccgcatccga accaatctgg gtccccatcg agcggcggtt cctcgagacc 240
 gtccaggggc atcacgaaga agcactacag aggaagtcgg cggcgcccggt gggggaagt 300
 cggggtgaga ttccgactc gttacgccac gggggccgag tttggctcg gagatctcag 360
 acagccgagg aggcgcgcgt ggtc 384

<210> 331
 <211> 420
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 331
 ctattgggta tcccaagatg cggttacagg cttcaatttc tacacagtcg gacttccaag 60
 ctgatgggtc tggatcatggt gtgccaatac cacaagggtg agatagtgga tcattaggca 120
 tttcagcctt acccaccata caaagagatt cgggtgtgca tgttaagcaa acacaagtg 180
 agtcacgcg ggaggtattca gatgatgaag tgacacgagg tgacacgagg accactgaaa 240
 acaaaagatc tgctgaagtc agacgcgcga gaaggatgca gtcaaatcgg gagttagcta 300
 ggcgatccag aagaagaaaa caggagcaca tgagtgaact tgaaaaccag gttgagcaga 360
 ctggactact gaagcgtctc actgatatga accaaaaagta tgatgtagca tcagttgaca 420

<210> 332

<211> 1439

<212> DNA

<213> Pinus radiata

<400> 332
 gcaacctgaa gcgttttagg cgggtgaggtg gaagaagggg gacaaggagg aacctgaaga 60
 tttgtttgaa ttaagctgtc atcgggcagg gcaagcaggt cttcatatct ctgcaataata 120
 tatctatagt cgcgcagact tgttttaggca atctatgttt tcgggtataaa ctgagggaggt 180
 ttcccattc tgtaggattc ttaaacgcgt tcttagggcc accggaatcgc tcaaatgtca 240
 cataccacag cctcctttct cataacaggt ttacgcgcga tttcttctct tctagaaggc 300
 cttcttctcc tttactaaat cgggtgtgtt tttcatcagtt tttctccaaa aatccttgaa 360
 gttctcttaa ttttttcgag ggtcgggttt tttatagttt atctacgggt aatcatcagc 420
 aagggccttt agatccgaag gtataatggg gcagcaatct ctgatataca gttttgttgc 480
 gaggggcacc gtggtgctgt cggagtagac ggaattcaaa ggcaatttta caggtattgc 540
 cgctcagttg ctgcaaaagc ttccgcgcag caacaacaag ttcacataca attgcgataa 600
 tcataccctc aactaccttg ttgaagatgg cttcgcatat tgtgtttgtg cagatgaatc 660
 cggttgaagg caagtaccaa tggcatttct ggagcgtgtt aaggaggatt ttaaggagg 720
 atatgggtgt ggaagagctg acacagctgt gtctaaccgc ttgaacagag attttgggtc 780
 aaaattgaaa gagcacatgc agtattgcat tgaccaacct gaagagatca gcaaacctgc 840
 aaaagtcaag gccaggtttt ctgaagttaa aggtgtcatg atggacaaca ttgaaaagg 900
 tcttgaccgt ggtgagaaga ttgaacttct ggttgataaa acagaaaaacc ttcgttttca 960
 ggctcaagag ttccaaaaga agggaaaccga agatgtgggt ttcagaacct 1020
 gaaagtgaat ttgattgttc ttggaattgt ggtggccttg attctcataa tttgtctctc 1080
 agtatgccat ggattcaatt gttcgaaaaa atgatctgga atagatagag gtcatttga 1140
 attggaacaa cttttgattg gctatggatg gcattcttgt tctcctttgt atttctctct 1200
 atattatcag tttcgggtga gatagttcta ttagtgttgc cagaggggat tttgtttgga 1260
 caatcactgg ttgatagtac atattgacta gtatgacaac gaaatgttct gaattattcag 1320
 tggggcagag actctgattg cgtacagcaa ctttagtgta ttatatcaag gtcattgcat 1380
 tgttatgttt cttattctta atgaagtatt gttttacatc ttgaaaaaaa aaaaaaaaa 1439

<210> 333

<211> 407

<212> DNA

<213> Pinus radiata

<400> 333
 atttaactgg gattgcaagc tgcttggtgt gtttctgtgc ttcaagcgaa gggaagggaa 60
 gacattccta gagaagaaaa aaatcaatat caatggggag ggggaagatt gaaataaaaa 120
 tgattgaaaa tacagcaaac aggcgaagtc catctctctaa gagaaaagga ggacttctta 180
 agaaagctca cgagctctcc gttttatgca atgcagaaat tgctctctat gtttttccca 240
 acactggcaa actccatgat tggccaagct ccagcatgaa aaaagttagt gagaagtacc 300
 agaaatcgga tcaaggacta ggacttatgg actaccaaca caacacgctg ttgtgtgaaa 360
 tgaacgaat caccaaaaga aatgaaagcc ttacagctcg tttaagg 407

<210> 334

<211> 307

<212> DNA

<213> Pinus radiata

<400> 334
 gtacgcgtc cactggtgcc taccgcagaa aattacttcg tgagatattg taacaacat 60

tcagatggaa	tatggcggt	ggtggacgtc	tctcttgaca	cgttgcggtg	gaaccccgcaa	120
ccccatccca	actgcctcc	tgcacttta	agatgcgcaa	gacgacgctc	cggttgcctt	180
atccaggaga	tgcccaatgg	ctattccaag	gttacgtggg	ttgaacatgt	tgaagtggac	240
gagagggctg	tgacccgtat	ttatgataag	ttggtaagca	cgttttcgcg	ccgaacgcca	300
taccgct						307

<210> 335
 <211> 530
 <212> DNA
 <213> Pinus radiata

<400> 335	
ctttcccaata	ttgagcccaa gcaaatcaaa gtttggtttc agaatcgaag gtgccgagag 60
aagcagagga	aggaagcctc gaggcttcag actgttaaca ggaagctgac ggcaatgaac 120
aagtgtctca	tgaggagaaa cgatcgcttt cagaagcaag tttcacagtt ggtgtatgag 180
aatgggttaca	tgagacagca gctacagaat gcactctgtg ccgccacaga cacaagctgt 240
gagctgtggg	tgactagtgg tcagcaccaa cataatccaa cactctcaga tcccccaaga 300
gagtgatgcc	ccgctggact cctgtctata gcagagagga ccttgacaga gttcctttca 360
aaggctaaa	gagctgctgt cgattgggtc catagtcctg ggtgaagcc ttgtccggat 420
tcgattggta	ttgtagctat ttcaaatact tgtaatggag tagctgcacg tgcttgcggt 480
ctgttaggat	tagatcctac aaaggttgca gagatcctta aagatcgccc 530

<210> 336
 <211> 402
 <212> DNA
 <213> Pinus radiata

<400> 336	
cattcttcca	gagggaccac ctgagagcgg atcagtaatt gacaatcgac aggtcgaagg 60
atcgatcctg	accattgcatt ttcagatatt tgttaacgat ctccccatcg caaagctgac 120
gctggagctc	gttgagactg tcaacaatct catttcatgc actgcacaga gaatcaaac 180
tgctctacat	aaagtcgagg atgtttgatg ttccagagatc ggtcgcaagc taacttaaat 240
atgtcttcaa	ttattttttt ttaccaaaac aataaatatt atttatgagt gttgaacaac 300
accatttcgc	agttttggga ttgtatatta tcagtttgaa agtgtgagtg caatttgata 360
accgactata	gggatggagg gaaaactgca tcgaaatcca ca 402

<210> 337
 <211> 356
 <212> DNA
 <213> Pinus radiata

<400> 337	
atattttctg	tagatgggtg gaggaactgc tgaatagttc ctaaatcggt tcttcccggt 60
ttggtcatcg	aacgagttcc tataactcgc caagaccagg ttcttcacgg actactaatt 120
ttgggtcttc	acacatcttt cccggaagta gatggggcgg gcactaggaa gaacagaaat 180
aaagagagata	gaaaatgaag tgagcaggaa tgtgagtttt agaaagagac gacgtggatt 240
gctgaagaag	gctgcggaggt tgtcaatctc ttgcgatgca acagtggcg ttgtgtttt 300
ctctccggcc	gggaaacttt ctgaatatgc cagcactctg gactcaaatg gatacg 356

<210> 338
 <211> 380
 <212> DNA
 <213> Pinus radiata

<400> 338	
attcgaaacc	ctaccaatcg gcaactcatcc ttctacaaac gcaagggcgg ttgtcttaaa 60
aaagcatttg	aacttgtgtg tctctgtgat gctgaagttg ctctgataat cttctctgaa 120
accggcagga	tttacagagt tgcaagccac gatgatgtga ccacagtatt ggcaaaatc 180
cgaatacaaa	cgaaaactgc cggaaaacgca atgccttcat cgcttcaaaa aacagagttt 240
gatcaattac	aagtcaggat gttgcaggag aagatagaca atttggagaa aacgaaaaag 300
catatggctg	gtgagaattt ggagtcactg acgtggaagg aattgcacaa agtcgaaaag 360

aaattaagca aggcatacaaa

380

<210> 339
 <211> 299
 <212> DNA
 <213> Pinus radiata

<400> 339

cctactttgga	aaggcaaatc	cttctaactg	ttccatcctg	cacgaatttg	aggttttggg	60
gggtggccagg	tcactctccc	attagcccat	actgtggaac	atgaagagtt	tttggagggtt	120
atcaagtctgg	agaatcatgg	cctgacacag	gaagaagctt	tgctatcgag	ggatattgttt	180
ctgttgccagc	tttgtagtgg	gctcgatgaa	aatgcagttg	gggcctgtgc	tgaacttgtc	240
tttgctccaa	ttgatgcac	cttagctgac	agttctcctt	tgctcccttc	tggttttcag	299

<210> 340
 <211> 584
 <212> DNA
 <213> Pinus radiata

<400> 340

tcgcagcgta	aagcgttcac	gggtgccggg	cgggtaactc	ttgaaaaata	ttagattcga	60
ctccctgacc	ctgggaggag	gaagaagaag	aagaacagca	ggagggaagcg	aaaaatttctt	120
aatagtaacc	agagaatagc	agcgggtgaa	gaagcagagg	gatcttgcaa	tggggcgggg	180
ctgggttcag	ctgaggcgaa	tagaaaacaa	aataaatcga	caagtccagc	tttcgaagcg	240
ccggaacgga	ctgctgaaga	agggctacga	gctatcagtg	ctgtgcatg	ccgaagtggc	300
gctaataatt	ttctctacca	gaggaaagct	ttacagagtt	gccagttcca	gcattgaacaa	360
gacgttgga	agatacgaaa	aattgttcata	tgcaatgcaa	gataccacag	gggtttcgga	420
ccgggaagca	cagaattggc	accaagaagt	tacaaaagtt	aagggtaaag	ttgagctcct	480
gcagcgatca	caaaagcatt	tggtggggga	agatctgggt	ccgttaaatg	ttaaggagct	540
acagcagctt	gaacgtcagc	tgagggttgc	tctgacacat	ctta		584

<210> 341
 <211> 592
 <212> DNA
 <213> Pinus radiata

<400> 341

ttgggtctgg	ggtcctgtcc	tgactggaat	ttttgtttca	ctcgtttctg	cccgtctgga	60
ttgggtctgca	ctgaaataca	ttgaacattg	gagttgtcga	ggcgagagata	tgggtcagca	120
gtccctcatt	tacagctttg	ttgcaagggg	cacgggtggtc	ttggccagag	acaccaatt	180
cacgggcaat	ttcacaacaa	ttgccaatca	atgccttcag	aagattcctg	ccagcaataa	240
taagttcacc	tacaattggc	atcgtcacac	attcaattat	ctcgtcgaag	atggttacac	300
atactgtgtt	gttcagatg	aatcagttgg	aagacaacta	ccaattgcct	ttctggagcg	360
cattaaaggt	gacttcaaga	aacgatattg	tggtggaaaa	gctgacacag	ctgtgtctca	420
cagctcaac	aaagactttg	gacccaaatt	gaaagatcat	atgcagttat	gtgtgtatca	480
ccagagaag	attaacaaac	ttgcaaaaag	gaaggctcag	gtttctgaag	ttaaaggcgt	540
aatgatggag	aattattgaga	aggctcctga	tcggggtgaa	aagatagaac	tt	592

<210> 342
 <211> 163
 <212> DNA
 <213> Pinus radiata

<400> 342

gtttctctact	ggaaatgggtg	gaacaatcga	gctttttatc	atgcatacat	atgcggccac	60
tactttagct	tctgtctagag	actttctggc	tctgagatgc	acaacagtg	tggaatatgg	120
tagtcttggt	gtttgtgaaa	ggctccttgag	tgggactcag	ggt		163

<210> 343
 <211> 372
 <212> DNA

<213> Pinus radiata

<400> 343

gaggagggag	gcctgctgcc	ctcagccgtc	cttaatggcg	agagctcctc	accaccacca	60
gcaacagcaa	caccaccagc	accaccaaca	agaagccagc	aggatgggta	cttccttgga	120
ggctgatctc	gatactgctt	gttcacagtaa	acctaacgat	tcctatgatg	cgctgaaatc	180
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ggttggggct	cctccagaag	ttgtcacagt	actggatgag	attattcaag	agaatcagct	300
tggagcccat	tgggaacta	tggatatagg	atgggatccg	gagcttgatc	aattcatgga	360
ggcctactgc	ca					372

<210> 344

<211> 418

<212> DNA

<213> Pinus radiata

<400> 344

gtagattcct	tgctatcaa	gaggggtgcac	aagggtttgt	tttaagaaca	cagacaggca	60
gacagacaga	gacgtgatca	tggggcgagg	gaagattgaa	ataaagaaaa	tagatgatgt	120
aacgagcaga	caggttaact	tctcaaagcg	caagatgggg	atattcaaga	aagcccacga	180
gctgtctgtt	ttatgcgatg	cagaggttggc	tggtctctac	ttttcaaaca	ccggaaggct	240
ctacgactat	gctagtccaa	gggtgatgga	acgaactatt	gagagatatg	aaaaatgtac	300
caaaagcaat	aattgcccac	catcagatcc	catgtgctag	aataagagcc	caattccagg	360
aggcattgaa	atattgaggg	agaaactctg	tgctattaca	agattgcaaa	gaaatctg	418

<210> 345

<211> 657

<212> DNA

<213> Pinus radiata

<400> 345

ggtacaagaa	gtggctcata	ttgcaaatgg	gtcgaccocg	ggaaattgta	tttctcttct	60
tcgggtaaat	gcattgtagta	caagccaaaa	cgtagagcta	atactgcagg	agagttgcac	120
agatgcatct	gggtctgtta	tagtgtacgc	ccccgtggac	gtcccagcaa	tcaatatgtc	180
tatgagcggg	gaggatcctt	catacatagc	ccttctcccc	tctggatttg	ccattcttcc	240
agacgggtcaa	aatagatctt	ctactagtct	actcctcgaa	ggggcgcaaca	gcagcagcaa	300
cagtagcaac	agcagtgatg	tggatagccc	gctcacaaga	ggaggttcat	tactcactgt	360
ggcctttcag	gtgcttgcga	gccatttacc	aacagccaag	ctgggttttag	attctgtttac	420
aaccatcaat	aatctcatat	gcaatcacgt	gcagcagata	aaatctgcat	tgcaactgtgc	480
agatgtctga	atcgcatgtg	aattatcgga	gtacgggttg	agggggcgcg	atgcagagaa	540
acaaacataaa	aaacgttcta	tcgggtactt	gcaccccaca	gggtagtaga	ataaaaaatg	600
atatgcataat	atatgttttg	tggttgcttt	ctgtagtttt	atctgtctgca	gttaagt	657

<210> 346

<211> 377

<212> DNA

<213> Pinus radiata

<400> 346

aaccggagag	caagaacaaa	gtggaaacgc	aacgaagtgg	agtgcgataa	tctgaaacgg	60
gtgtgcgaga	gtctgaggga	ggagaaacaga	agattgggga	aagaagtgcg	gtcgtcgaga	120
gccatgaag	tcccgcagct	accacattcg	atgcctctgg	cagccgcgaatg	cctcgcaatg	180
gtctcggcct	gcgaggggct	tgcaatcaag	aaccgcggcg	ccgcacattc	ctccaccggg	240
aagtcaacaac	aatccctcct	tacaattatg	gggattgggg	atgtaaatat	gatatccaaa	300
aataaccaaa	ccccttcaat	gggaattggga	gatgaaatga	attgaagaaa	gtgaacttaa	360
aaaaaaaaaa	aaaaaaaa					377

<210> 347

<211> 558

<212> DNA

<213> Pinus radiata

<400> 347
 gaaagaagga aagaattggg cgagggcgcg tcgagctgaa gcggatcgag aataagatta 60
 accgtcaggt cagcttttcg aaacgcgcga atggctctgt gaaaaaggcg tatgaacttt 120
 caggtgtatg tgatcgagag gtgacacttg ataattttct caagcagagg aaaactcttat 180
 gagtgcgaa gcgccgggat gctcaagact ctggagcgat atcaaaaatg ttcatcagta 240
 ttgcaagac cgactgtatc ggacccggag gcgcagaatt ggcatacaaga ggctggcaca 300
 ttaaaagcca aagtgtgaact tttaacaaga tcaaaaagc acttatttagg tgaagacctg 360
 ggccctttga gtattaagga cctgcaacaa ctggaaactg aacttgaggt tgcactgaca 420
 catgttaggt caagaaagac tcaagtcatg ttggaaatga tggatgaact acgcagaaaag 480
 gagcgaattt tacaagaagt aaacaaatct ctgcgcgaaga agttgcagga ggcgagggga 540
 caggcatcca atgcacatg 558

<210> 348
 <211> 331
 <212> DNA
 <213> Pinus radiata

<400> 348
 ctcagataga gctaatagca gtgagcttct gggcagcagc agatcagatg gagatcaccc 60
 acatcatggc caccatgatc agcagcagca gcagcaggag aatcatatgg tgtggcagaa 120
 ttcaaggctc aaggcagatg ttctccaaca tccactgtat gaccagttgt tggctgtcta 180
 tggttcctgc ttgaggatgg caactcctgt ggatcagctt ccaaaaaatg atgctcagtt 240
 ggctcagcag caccatgtgt tggccaagta ctcaagtcta ggaaggaacc agctcttgac 300
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<210> 349
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 <212> DNA
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<400> 349
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 tcttgatgca taccggaagg gggataagtt gaaatttgca aatcattcac caactccaaa 180
 ttgctatgca aaggtgatta tgggtgctgg tgatcataga tggggtatgt ttgcaaaagga 240
 acgcatgca gcggtgag 260

<210> 350
 <211> 479
 <212> DNA
 <213> Pinus radiata

<400> 350
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 aggaagagat tcccagagga gaagatcaag ataatgggg agggggaaga ttgaaataaa 120
 aatgattgag aacgcaacaa acaggcaagt caccctctct aagagaagag ggggacttaa 180
 aaagaaagct caggagctct ccgtcttatg caatgcagaa gttgctctca tcattttttc 240
 cagcaccggc aaactccatg agtgggtcaag ctgcagctca ttctttatgt tcaaaaaaag 300
 catgaagaaa attctcgaga gataccagaa atcagagcag ggcactaggac tcatggatta 360
 tcaacatcaa cagctgtgtg gtgaaatgag acgaatcacc aaagaaaatg aaagccttca 420
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<210> 351
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ctttggaac	coatggtgga	agaaatgtat	atggaggaaac	ttagagagggc	cgaaacacag	180
aatcatcgag	cagatcgaa	ggtaacaaca	gaaagtggtc	aaaacaatga	agaaacggtg	240
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<400>	352					
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ggtttccgag	taattctctc	agaatctgga	tcagaatggt	tctctctcaa	aacgga	176
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<212>	DNA					
<213>	Pinus radiata					
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cgtcatctct	gattctcgca	tatcttcggt	gaaacacagaa	gtttgcagcg	gtagtggagg	120
ccaatttgag	ctgatccgca	ggaaagaaga	ggggagatgc	ggcgtgctct	atgctgagcc	180
ttcattttgt	gtcactctct	tagttacttc	attacctcca	cagcagcagg	aaggccggat	240
ggtaacatcc	ctggcagtg	atatggacag	ctcatgttct	tgtaaaccaa	atgaagctga	300
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aaattcttga	atccatgcaa	agaaagatgt	tgggcgagga	gctggcatca	tgtgcattga	360
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caataaataa	actggtttat	aaatcagcgc	aagcgacatt	ggaaaccatc	tgaagagatg	180
cagttcgtag	ttatggatag	tcttaattcc	cacaacgctg	cttttttcc	ggaggagacat	240
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aaacaccagc	tttagtgcaa	tgctgtagat	ttgtctgact	catcttttat	atgtatagct	360
ggatctctaa	aatgggccat	gtttcataac	gtgctagata	tgagt		405

<210> 357

<211> 468

<212> DNA

<213> Pinus radiata

<400> 357

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cgcataccac	aaaaagaaaa	atgtacagtt	ttctaatgga	cggcccatgt	gtttactgtg	180
ccatagtgga	tgaagcgctc	gggaaacgcg	aggtctttgt	atttctcgag	catgtcagag	240
atgagttcaa	gaaattgttg	aagaacagag	gtttgtgaag	gctcagttcg	tgactgtttg	300
ataaagaatt	cggtctctgt	tacaagcgcc	ttgtgtgctc	ctttgtgggt	gttctctcaa	360
tagaaaaagg	tcgcttgatg	gaggaagaat	cgaatccca	acctgctaaa	acacatccag	420
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<210> 358

<211> 499

<212> DNA

<213> Pinus radiata

<400> 358

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tatcacagtc	tcaaacgctt	gtgcatgggt	aactcttatc	tagtgggtat	ttgatccgac	120
cctgtggaag	cagaggagca	ttagtcacat	tggttgatca	caggaaacta	gaggcttcaa	180
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cagttgagcc	ttcttatcat	cttcaaggta	aagtccaacc	ggaatatgatt	tccttatcaa	300
aaaaactgca	cagcccatgt	aatgtacggt	catcacgtca	acggctttgc	agagggctta	360
atgaggcgag	caacacatta	cctgatgatg	gctggatgtc	attgtccaaa	gatgggctgg	420
gggatgtcac	tatttgtgaa	agctttgtca	aattgcccga	accaaagatg	tcgcaaatag	480
cctatgtcaa	cagcatggg					499

<210> 359

<211> 462

<212> DNA

<213> Pinus radiata

<400> 359

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tccaaaagat	gcagacaaac	atatgctcgc	gagacagact	gggcttacc	gaaatcaggt	180
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gagtgccgag	aaaaaagaag	atgcattgtc	aaagggaagg	gctgcaggga	ataaatggaa	360
tatacatgag	cagcaaatgt	ggaatctc	aaaactcgac	aatattgcac	aggatggagg	420
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<210> 360

<211> 357

<212> DNA

<213> Pinus radiata

<400> 360

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gcaaaaggga	agggagagaa	gaggagaaag	gtgaggggga	aaaccagagt	gaagagaaat	120

gagaacggga	ccagcaggca	ggttactttt	tgtaagcgca	ggaatggtct	gctgaagaaa	180
gcgtacgagc	tgctcagtgct	ttgtgatgccc	gaagtggcac	ttattgtttt	ctccccaaaga	240
gggaagctgt	atgagttgcg	taatcccgagc	atgcagaaaa	tggttggaacg	atacgaaaaa	300
tggttcagaag	gaagtaacc	gacgagtaca	gcaaaagagc	aagacgtcca	gtgttta	357

<210> 361

<211> 749

<212> DNA

<213> Pinus radiata

<400> 361

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ttaccattct	gtgggcaaaa	gcgagagag	aggagaaatgg	tgaggggaaa	gaccagagtg	120
aaaaggatcg	agaaacgac	gagcaggcag	gttacgtttt	ctaagcgagc	gaatgggtta	180
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tcaccaagag	ggaaactata	tgaattcgcc	agtcgccgca	tggaaggagca	tttggaagaag	300
tataaaaaac	gttcgaagga	aaatggcatg	gctcagacaa	cgaagagca	agatactcag	360
tattccaaac	attccaaaca	aaagctcgca	aatatgggaag	aacagattag	gattcttgaa	420
tcaacccaaa	gaaagatgtt	gggggaaggg	ttggaatcgt	gttcaatggc	agaattaaat	480
aagttagaga	gccaaagctga	acgaggattg	agccatatac	gggctcgaaa	gacggaaata	540
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ttactcagta	gaaagtggtt	tgatcgtcaa	tccgtggagc	gttcgggttc	aacatcatct	660
tcaattggat	tggggaagcat	cgagcagatc	gaagttgaga	cacaactggt	tataagaccg	720
ccaaatgcac	aggatcactg	ttctgtaaa				749

<210> 362

<211> 670

<212> DNA

<213> Pinus radiata

<400> 362

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tggaagcaga	gggaagcaaa	atatctccag	agaaacagaa	aaggagatta	aaaacccac	180
agcaggtcga	aggtctagag	agcttttatg	ctgaacataa	gtatccttcg	gaagctatga	240
aatcacagtt	atcagaagaa	ctgggattaa	cagagaagca	ggtacaagga	tggttctgtc	300
acaggaggct	taaggataaa	aggctcatga	aggaagaagc	ttccaacaat	ggaaaacaaag	360
atccacacaa	tgccataatg	caagattctg	ttaatggagt	caaacaagat	cttagcgcca	420
gtggaaaaaa	atctgatcac	caacgccatt	cgaggtgcaa	agaggttgaa	agtcaacgat	480
ttgcgaatgc	catggattat	cctgcagctg	tctttgcgtc	agagcttagg	gatcatgat	540
tgttcaaaag	aaacctgat	aacgaagaca	cctttgcagg	aagtagttca	gcttcacaag	600
acagatcgtc	attacaaggt	gggaatcctt	atgaagctga	ggcaagaaga	cgccatttc	660
agaatggtaa						670

<210> 363

<211> 651

<212> DNA

<213> Pinus radiata

<400> 363

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catcatgtgt	tgctccttga	aggtaaacat	gtacaatatc	atagactttc	ttctggagat	120
taatttcaag	tttgacacaa	tcttatcgta	ggctttgttt	ggctgctgtc	agtcattgcc	180
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tattgtctaa	attatgcaac	agggatacgc	ctatctacct	gctggagtg	gtgtttccag	360
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tgattgtacaa	attatacaga	gtccctgaa	ttaacttatt	gaacaaaatc	tttctctggt	540
caagccttgt	gtgactggcc	aaagaaaaaa	tacagaggga	gagcatgtaa	cgacgatatt	600
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<210> 364
 <211> 257
 <212> DNA
 <213> Pinus radiata

<400> 364
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 taccttcaac taccttgttg aagatggctt cgcataattgt gttgttgtag atgaatccgt 120
 tgggaaggcaa gtaccaatgg cattttctgga gcgtgttaag gaggatttta agaggagata 180
 tgggtgttga agagctgaca cagctgttgc taacagcttg aacagagatt ttgggtctgaa 240
 attgaaagag cacatgc 257

<210> 365
 <211> 357
 <212> DNA
 <213> Pinus radiata

<400> 365
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 gatccagatt atgtggctct tctgcatctc ggggttgcaa ttttaccaga tggggccaaag 180
 tgcattggcag taccatattc aggcattaac gacctaggca gtggaggatc tttactcact 240
 gtggcttttc aaattttggt tgactctgtg ccaacggcta aattatccct ggggtctggt 300
 gcaacagtga atagtctcat ttcattgcact gtggacagga tttaagctgc tgttact 357

<210> 366
 <211> 309
 <212> DNA
 <213> Pinus radiata

<400> 366
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 taataatcag ggtcatgacg gaggagcaaa tggagaccct gcgcaggcaa atttgcgttt 180
 attcaacaat tggcagctcag ttggtagaaa tgcacagagc catgtcacag cagcaggcct 240
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 tccagggtt 309

<210> 367
 <211> 575
 <212> DNA
 <213> Pinus radiata

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 tttgtttttaa aggaaaaatct taaattagct aaaaactttt tgcacgttca aaaggccttt 360
 aaattttctc tccagtttag agtattttga gaaaataaag cgaatgcgac cgggagccac 420
 acaattgtag caagctctgag ttatttttca aagcatttct ccgaataaag tagaattgct 480
 aagaattttg tgaatcgcta aagcatttgc aacatatagc gcagatatca aaaaaataaa 540
 gaatttatcg gtaaaaaaaa aaaaaaaaaa aaaaa 575

<210> 368
 <211> 243
 <212> DNA
 <213> Pinus radiata

<400> 368
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 ggggaaaaat ccagattgaag aggattgaga atacggccag caggcagggtt acattttcca 120
 agcgtagaaa tggattgctg aagaaagctt acgagctctc ggttctctgc gatgcagaag 180
 ttgacttat gattttctcg ccaggaggaa agctctatga attcgcaat accagcatgg 240
 aga 243

<210> 369
 <211> 184
 <212> DNA
 <213> *Pinus radiata*

<400> 369
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 acaatgttcc aggttcactg ggaggcatta caggggagtca agttatcett ccaactggcac 180
 atac 184

<210> 370
 <211> 158
 <212> DNA
 <213> *Pinus radiata*

<400> 370
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 ggaatgatac agcagcatgc ctggagacca caaagagggc ttccagagag ggcggtttct 120
 attctccggg cttggctatt tgagcatttc cttcatcc 158

<210> 371
 <211> 462
 <212> DNA
 <213> *Pinus radiata*

<400> 371
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 acactgtctg tcaaatccag gagatggaag cgttgttttaa ggatgtgtcca catcctgatg 180
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 tgggtttcaaa atcggcgctac tcagatgaag gctcaacagg atcgtctcaga caacgccatt 300
 ctccgtgcag agaatgaaa tctgcggaac gagaacgtag cactccgaga agcaattaaa 360
 aatgggtgct gtccaaactg cggagggtct acatcgctgg gagagatgcc tggattcgac 420
 gaacaccatt tccgtataga gaatcgcgc ttaaggagg ag 462

<210> 372
 <211> 510
 <212> DNA
 <213> *Pinus radiata*

<400> 372
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 cgggttgcctt aaaaaagcgt ttgagctttc tgttctctgt gatgctgaag ttgcccttat 240
 aatcttctcc caaaccgga agatttacga gtttgcgaag catgacgacg tcaacgcaat 300
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 aaacaccgg cgggagacgt tgcattgagg gacaaatat ttgggaaaaa ggaaaaaagt 420
 ggagaagtgt catgagaaga tcaatatgtt ggaaaaaaga ggaaaaaaca tgggtttggtg 480
 aaaatttgga gtcattaacg gtcattgaat 510

<210> 373
 <211> 466

<212> DNA

<213> *Pinus radiata*

<400> 373

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aagatgcacg	gcaaaaagtt	cttgattggg	ggagctcgca	cgacaagtgg	ccttatccctt	180
cggaaacgga	gaaaatagct	ttggctgaat	gcacgggggt	ggatcaaaaa	caaatataata	240
attggtttat	aaaccaaga	aaacgcact	ggaagccttc	tgaagatatg	cactctcatgg	300
taatgaacag	tcacagtcct	cacagtgcgt	ccttgatagt	tgagagacat	atgatgactcg	360
aagggatctc	ttagattgct	agaaagaacc	ttcggtcgaa	aacagcacac	aatgctattg	420
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<210> 374

<211> 573

<212> DNA

<213> *Pinus radiata*

<400> 374

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aaaaagagag	cagtcgaatt	tggcattgaa	atacatgatc	agcaagagat	tgaaaactgag	180
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<210> 375

<211> 526

<212> DNA

<213> *Pinus radiata*

<400> 375

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ggaaggaaacc	tcggctattc	tgtaagttca	ctcagatttt	gagaaactct	tgggattttg	180
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gtgcacctct	gcaagcgccg	aggcggtctg	atgaagaagg	cctacgagct	ttcagtgctg	300
tcgcatgacg	atgtagcgct	cattgttttc	tcgagcccgag	gaaagtgtga	cgagctgggc	360
accagcaaca	acaaacaaca	cagtatgagg	tcaattattg	aaagatatca	aaagtgttca	420
cagacgggaa	aacatattgaa	cttttcgaat	aatacttcag	acgagaaaat	gaagcaagaa	480
ataaatttac	ttaaacacaa	attgatcagc	taaaacttact	aacaga		526

<210> 376

<211> 335

<212> DNA

<213> *Pinus radiata*

<400> 376

aaaatggcgg	cttagatgaa	ttacgagcag	agactcatcg	cagcggcagc	gctagctgac	60
aacctgaact	ccacgactgc	aaaagaattt	gatattccca	gcgctgaaga	agtgcgcgag	120
aaatgttcag	aattggggagt	caccgcacag	ctgaaggcac	accaggccca	aggactgtca	180
ttggctgatac	gcgcgatagc	cattggcgctc	aattgtatac	ttggggacga	gatgggaactt	240
gggaaaacat	tgacggctat	aagtttggg	gcttacttga	aagatcgacg	gaaatgccca	300
gggccatttt	tggtattgtg	tcattaaagc	gtaat			335

<210> 377

<211> 773

<212> DNA

<213> Pinus radiata

<400> 377

gaagtgtgga	tgttcttact	gctttctcaa	ctggaaatgg	aggaacaatt	gagcttttat	60
acatgcagat	gtatgcgcga	actactttag	cttctgcccg	agatttcttg	actcttagat	120
acacttctgt	attgggaagt	ggtagtcttg	tggtttgcca	gagatccttg	agtggagatc	180
agggaggtcc	cagcatgccc	gcggtgcagc	agtttgttag	agcagaaatg	caaccaagtg	240
gatattttgat	tcggccatgc	gaaggtggag	gttctctaat	tcatttgggt	gaccatattg	300
attttggagcc	atggagtggt	cctgaagtgc	tacgtccact	gtatgaatca	tccactgtac	360
ttgccccaaa	ggttacaatg	tcggcccttac	gccatttgcc	tcaaatagca	caagaggcat	420
cttctgattgt	gggtccttgg	tggggaaagac	aacccgctgc	attacggaca	tttagccaga	480
gattgtgcaa	gggttttcaat	gaggcagtta	atggcttcac	agatgatgga	tggcttttga	540
tgggttaacga	cggaaatgga	galgtaaacta	ttctcgtcaa	ttcatctcca	agcaaatctg	600
tcggtcaaca	gttttcttct	tccgatgggc	ttctcgtctc	tggtgggggc	atcctatgtg	660
caaaggcttc	tatgctatta	cagaatgttc	ctccagcatt	gcttgttcgt	ttcttgcgag	720
aacatcgatc	agaatgggca	gatagtaata	ttgatgccta	ttcagcagcc	tct	773

<210> 378

<211> 407

<212> DNA

<213> Pinus radiata

<400> 378

atggcaatgg	aagagaggag	tgggtgatctt	ttgaaaggct	gtggctcttc	tgagaatgca	60
ttggatgcta	tctctgaggg	ttctatacag	aatcatttgg	catggtcaga	agtaacagca	120
ttgtctgttaa	ctcttcttctg	tgctctagat	gcgggaattg	aacactctct	ccttggttct	180
atgatgtcaa	tagacagata	tgacagcaga	gagagctttc	atagacttgc	ttgggcttat	240
gcacacgtgc	cagatctgca	tatcatgtgg	cttcttcatt	tatgtgatgc	tcatacaagag	300
atgcagctct	gggcagaagc	tgcgcaatgc	gcagtggtgt	ttgctggggg	cataatgcag	360
gcatttgtag	gaagaaatga	tgctgtctgg	ggaaaggagc	atgtaac		407

<210> 379

<211> 385

<212> DNA

<213> Pinus radiata

<400> 379

cgaggctcag	tccagctgag	gaggatcgaa	aacaaaatca	tgctcgaagt	aactttttct	60
aagagacgga	acggactgat	gaaaaaggcg	gcggagctgt	caatactgtg	cgacgctgaa	120
gtggcccttaa	tcgtcttctc	caacaaaagac	aaactgtacg	agttcgccag	ttccagtatg	180
accaagatttt	tggaaagata	tcggaaagcgt	tcaaaatttaa	tacaagatat	cggtaaaagt	240
ccacagaatt	cagacattga	gttgacgcgt	ctaaaagaag	aggttgacgc	cttacaaga	300
tccagaaggc	atcttttggg	tgaagacctt	catcaactag	gtgctacgga	tctgcaaac	360
ttagaacaac	agcttgaaga	agcgt				385

<210> 380

<211> 513

<212> DNA

<213> Pinus radiata

<400> 380

tttcaatgcc	cctetttttc	cagtggacga	gtgttcaatt	ttccctgtgt	tgatctgata	60
cctataaatc	tgatggattc	ttttgagca	aagggaagg	gagagaagag	gagaaacgtg	120
aggggaaaaa	ccagatgtaa	gaggattgag	aacgcgacca	gcaggcaggt	tactttttct	180
aaacgtagga	acggtctctc	gaagaaagct	tacgagctct	cggtgctttg	tgatgccgaa	240
gtggcaacta	tggttttctc	cccaagaggg	aagctctatg	agttcgccaa	tcccagcatg	300
cagaaaatgt	tggaaacgata	cgagaagtgt	tcggaaaggaa	gtaaaacaac	aagtatagca	360
aaagagggaag	atcccaaggc	tttaaaacga	gaatttgcca	atatgggaaga	aaggattgag	420
attcttgaa	gcacgcgaag	aaagatgtgt	ggcagggagc	tggcatcatg	tgcattgaag	480
gattttaatc	agttggagag	ccaggttgaa	cga			513

<210> 381
 <211> 210
 <212> DNA
 <213> Pinus radiata

<400> 381
 cacagttctg gaacctgtta aagagaaatc agtcgaggtc aaactccttc tgtttgcacg 60
 aggatgccca gcattatgga gaagcaaaat agtggtgaag atagtgatag caagggtcag 120
 cttgataatg gcaagtatgt ccgttacacc aatgagcagg tggagacttt agaactgtgt 180
 tataatgaat gctcaaagcc cagcacaagc 210

<210> 382
 <211> 380
 <212> DNA
 <213> Pinus radiata

<400> 382
 cttcgtttctc caggatttct cgacagggtt taaacgacgc tagcaacccc ctgtgtatttt 60
 acagttctgtt tggccaggcc ggtgaaaatg ggtgcattcg cccttctatc aagctggatt 120
 gatgctgcca ctaatcccaa gtacaggaag aagcgtaaac aatttcagac cgtggagtgt 180
 agagttcgaa tggactgtga aggctgtgag agaaaaatga gaaacgcact aaattcaatg 240
 aaaggagttaa gttctgtaga agtggagaga aaacagtata aggcaacggg gacgggatac 300
 gtggatgcca acaaatgtct gaagagagtg aggcacacag ggaacaaaggc agaattgtgtg 360
 ccttacaagc cttaccatct 380

<210> 383
 <211> 407
 <212> DNA
 <213> Pinus radiata

<400> 383
 ttttcaaaa cttggttttc aggcaattta cttgcccttg gagccaacaa acagatgcat 60
 cttgattcca gttctacttg agcaccaggg ctctcaaatg ttctgatagg ctccaagtat 120
 cttaaagcag cacagcaatt gctcgacgaa gttgtcaatg taggtgaagg catcaagcct 180
 gattcagcca aacatcagaa atcacaatca tggattggaa caacagctaa taaagagaat 240
 agtggagctg aaggtgtgtg gaaggatgga gcagctgctg ccctcatatg gcgttcaact 300
 tcagcccaag aaacaaatga ccgtccctct gagctgtcac cagcagaaag acaagagctt 360
 cagatgaaaa aagcaaagct tgtggccatg ttggatgagg ttgatca 407

<210> 384
 <211> 441
 <212> DNA
 <213> Pinus radiata

<400> 384
 ggcaagaata gttgcctgat agcaccggaat ttattaagtg gccttagaac gtgttcagag 60
 atcgctgaat acatgtccca caatgtatct gcaatacagc atggagttgg gtagtgcata 120
 acactccact ctgatggtag caggaagact gattgtggtg atattctgaa gtctggacaa 180
 gagcaagatt ttggcgtaga aaaggagagc tgcggagggt taagtacaca tgcaagtctg 240
 ctggtcatcc atcaatcagg aaaagaatta aagatggaaa aggacagcca ttagagcaat 300
 atacaccatg tgggtgtcaa ctgacatgtg gaaagcaatg cccttgctc cgaaatggga 360
 cttgctgtga aaaatatgtg ggggtgctcaa agagtgtgcaa gaaccgtttc agaggtgtgtc 420
 atgtgtctaa gagtcaatgc c 441

<210> 385
 <211> 423
 <212> DNA
 <213> Pinus radiata

<400> 385

agcagatgaa	agcctttgga	ttccgaacct	ggatgctggt	aaagaaactc	ttagctatga	60
agaatacatg	cgccaattcc	cttcacaaat	tacgccaaag	cctataggcc	ttgccactga	120
ggcgactaga	gaaactggca	tggtgatcac	aaacagcttg	aatcttgttg	aaacactcat	180
ggatgtggat	cactggaagg	aaatgttccc	ctgcgatgata	tccaggggag	ccacagctga	240
tgtaatatcg	agcggaatgg	gcgggacaag	gaacgggtga	ctgcaactga	tgtatgcaga	300
attgcaagtg	ctttccacgt	tggttctctg	tcgagagtac	ttctagagcg	gccgcggggc	360
catcgatttt	ccaccggggt	gggggtaccag	gtaagtgtac	ccaattcgcc	ctatagttag	420
tcg						423

<210> 386

<211> 445

<212> DNA

<213> *Pinus radiata*

<400> 386

gcaaaagcga	aatattatgt	ccacgaggat	cccaagctcg	ttttcatcat	tccatggcca	60
tgcagatgct	cttctctcag	cagcaatggt	tccagggttct	caaggagatc	ataagctcaa	120
tcacagacct	ggatgaaacc	acgagctagt	ctctgagcag	tctatcatgt	tgatctcgct	180
catgcccgtt	gttaagacaa	aagcttgcct	tggtcttcgt	aatcagtttg	aaatttcacag	240
ggaacaaacc	ggaatttgct	acacagatca	gtcctcaaat	attccgctaa	gccccatagt	300
cacatcgcta	gcctcgacgg	ctcgaggaga	agcgccggatg	ataccgtctc	tggaagccaa	360
cagtgcctcat	ttcaatgtgg	ataacgagga	gcgatgcaata	aaatcgaaaa	tcttagcgca	420
cccacagtat	ccgagcttgt	tggga				445

<210> 387

<211> 343

<212> DNA

<213> *Pinus radiata*

<400> 387

gaactagtca	atcagagatg	ccatgagaaa	tcccatctgc	acaaactctg	gaggacctgc	60
tgttcttgcc	gagatgtcct	ttgaagagca	gcaactctgc	atggaagaatg	cccgtctaaa	120
agaagagctg	gatcgattgt	gtgcactagc	aggggaagttc	tttggcgagac	ccatctcttc	180
aatgcccatt	gttccctcta	tgccataatc	atccctagac	cttggagctgc	gtggcatgcc	240
cacttctgtt	ccctcggtta	gtgcagacct	gatgcatgga	cctgtggtg	gtcgaaacgg	300
aaacataata	ggtattgaga	ggtcgatgct	ggctgagctt	gct		343

<210> 388

<211> 1193

<212> DNA

<213> *Pinus radiata*

<400> 388

ccgttgtgtg	tcttcttctc	accctcagcg	tctccttaca	cacacaattc	aatcaatccc	60
ctcgcacgcg	caccggtgtc	gcctgttctt	cctcctctgg	atcaaccatc	tcccacagtc	120
ctactctcgt	caatccgagc	gctaattttt	gcgaaatctc	tgtctctttc	tctttattacc	180
ggtttctgat	tagaaaactg	caaaaacaga	ggattttaga	gtacccaact	ggggaaacaga	240
gcgttccgaa	tgatgggtat	tggttgttcc	tgctgtctgg	tatctcgtat	gcgagctctc	300
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tagcgattct	gaggtgggca	tatgtctcag	ttttaatgct	actagagagc	accgtttgaa	420
ggagtttttc	tctgaggaga	tgatgatgtc	tggtgggaga	atgtatgggt	ggccgaacgt	480
ctctgtcacg	gccaaacaga	acatttcccg	ctctgcagat	gcactggaa	ctctactttc	540
ttctctctgt	tccaatgggt	caagatctgt	agctaatttg	gaggagggtga	taggttaagt	600
gtcaaaaaga	tcatttttaca	attcctttga	ccaggaaagaa	actggagatg	aagaccttga	660
tgattgtatc	catccaccgg	agaagaagag	aaggctgact	gctgaccaag	tgacgttctc	720
ggaaacgaag	tttgagatcg	aaaaacaagt	ggaacctgag	cgcaagatac	agctagccaa	780
ggagtgtggc	ctccaaacct	ggcaagtgtc	agtctggttt	caaaaccggc	gggcaagggt	840
gaaaacaaag	cagttggaaa	gggattatga	tattctgaaa	tcacgctatg	agaatttgag	900
agttgattat	gatagcctgc	tcaaaagaaa	ggataaaatta	agggctgagg	ttaccttctc	960
aaacagacaag	ctacacagca	gtgacatgca	agccctcaca	aaggattctg	agtcctgtga	1020
caagaagaagc	tatcccagca	ctgcctccca	ctctgactgt	gttgggggagc	ctgaaagaag	1080

tactgctgcc	aaggatacac	caccagggttg	taaacacgaa	gatcttctga	gctctggaac	1140
agatagcagt	ggggctctgg	atgaagatag	tctccaccat	gttgactgtg	gtc	1193

<210> 389
 <211> 385
 <212> DNA
 <213> *Pinus radiata*

<400> 389	
aaaattgaga	atactacaa
aaaaagcctt	atgagttatc
accagtggga	gaactctatga
atgagaaacct	atgcagagaa
tggcaagagg	aagtcagaaa
caaatcaatgg	gtgaaggcct
caatggaaa	aaagtatttg

<210> 390
 <211> 359
 <212> DNA
 <213> *Pinus radiata*

<400> 390	
gtacactgca	gagcagggtg
ctctctcgct	cgccagcagc
gcaaatcaaa	gtctggttcc
tcgtctccag	actgtcaaca
cgatcgccct	cagaagcaag
gatacagact	gtttctatta

<210> 391
 <211> 257
 <212> DNA
 <213> *Pinus radiata*

<400> 391	
caagcatgaa	ttgatgtgc
ttatttcccc	ctgattggac
agtggaagag	cgtgaaggtc
atctcttatt	aaggcatggc
ggaagaatgt	ctgtgcc

<210> 392
 <211> 290
 <212> DNA
 <213> *Pinus radiata*

<400> 392	
ggcctcctcg	tgactatgag
acaaaacgta	tttttctctc
agcgtgtggc	ttcctgtttc
agaagcaagt	gggatatact
aaaggacaag	atcctcgcaa

<210> 393
 <211> 465
 <212> DNA
 <213> *Pinus radiata*

<400> 393	
gctggatca	ttatacaaca
	atcatttgaa
	tgggaatttg
	gcagatgaaa
	tgggtcttgg

caaaaacagt	caggtaattt	cattaatatg	ttactttgat	gaacaaaaga	atgacacagg	120
acctttcttg	gtagttagtc	cttcctctgt	attgtctgtt	tggctgagtg	aaattagctt	180
ttgggcccc	agcatcagta	aaattgcata	tacaggttct	cctgatgac	gccgtcgatt	240
attcaggagg	aacatttctc	agcaaaaatt	taacgtgtct	ttaactacat	atgaatactt	300
gatgaacaaa	cgatcgacca	agactgagta	aaatttcatg	gcattatata	ataattgatg	360
agggacatcg	cataaaaaat	gcattcttga	aactgaatgc	tgagctgaag	cactatcata	420
gtagtcatcg	attattgctc	acgggaacac	cactccagaa	taatc		465

<210> 394

<211> 157

<212> DNA

<213> Pinus radiata

<400> 394

tcccaaaagat	gctgacaaac	atatgctagc	aaggcaggca	ggtttgacaa	gaagccagggt	60
tcctaaatgg	ttcataaagt	acagtgctcg	tctctggaag	cccatggtag	aagaaatata	120
tatggaagaa	atcaaggaag	ctgagtttag	acattca			157

<210> 395

<211> 384

<212> DNA

<213> Pinus radiata

<400> 395

accaatttaa	cgcggaagca	accgaccccc	ctgaaatccc	cttaacacga	attttctgagc	60
tggggccgggt	attgtgttagc	agcaggatga	tgcagccaag	gtttatgaat	cccccttctg	120
acggaagaa	gcagaggcac	cgcggaccgc	atggagattt	ctacccctgg	aatcgccct	180
tgaataatcct	taccagggttc	tcatgaagca	ctgcacatcc	ctgctaaaaa	cgctaattgaa	240
tcacaaatatt	gggttatgttt	ttaacagagcc	cgtcgatcct	gtggccctgg	gggtttcccca	300
ctattttcact	gtttattacct	cgcccatgga	tttgggcacc	atcaaggcaa	aattgcagga	360
cagcgtttat	tcaagccctc	tcca				384

<210> 396

<211> 694

<212> DNA

<213> Pinus radiata

<400> 396

gttgcaactgg	agttgctgca	cgagctttgt	gctttgcagg	tctcgaaact	tcaaaggctg	60
cagatattct	taaaagatcg	cccgtttggc	ttcatgattg	tccggcctcg	gatgttttga	120
ctgcatttcc	tacgggaaaa	ggaggggcag	tcgagcttct	atacacgcaa	atgtacgctc	180
caactacatt	agccccctgt	cgggacttat	tgactctgag	atacacatca	tgtgtggaag	240
atggcagcct	tgtggtttgt	gaaaggatca	tgactgtggt	tcagagtggg	ccaaacatgc	300
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gttggggtag	gcagccagct	gctctcgagg	catttgatcca	gagactgtgc	aggggtttca	600
atgatgtgct	gaatggcttt	gcagatgatg	gttgggtctt	gttgggttag	gatgggggtg	660
aggacgtgat	cattgccata	aattcatctc	caag			694

<210> 397

<211> 493

<212> DNA

<213> Pinus radiata

<400> 397

ccaataattta	cgtcagcaat	tacaattgct	gcattgcagct	gctggcaata	acaccagatc	60
tcttcagcag	atggcagtg	ctgcaaatga	caccagctct	gattcagttg	taacaagcgg	120
gcaacggcag	caacactcac	cgcaacatcc	tccatacagt	gtaagtacct	ccaggttggt	180
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ctggatccag	atgcctcgga	tgaagcctgg	tccggattcc	attggtgtgg	tggctgtgtgc	300
acatgcttgt	ggtagagtg	ctgtgcaagc	atgggggtgt	gttagtttgg	aaccttcaga	360
ggtagctgaa	gccttcgcag	ataaggtatc	ttggctttgt	gactgccgga	agatggaggt	420
tctggggact	ttgatccaa	ctgatggagc	gaaattggaa	ctattacata	cacagatgta	480
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<210> 398
 <211> 436
 <212> DNA
 <213> Pinus radiata

<400> 398	
atgggggaaga	cgaagatgga gatgaaacac attcaaaacc ctgagccgccc ccaagttact 60
ttctcgaaac	gcaagaacgg attgctaataa aaggcattcg agctttctgt tctctgcgat 120
gctgaagtcg	cccttatcat ttcttcggaa actggcgaaga tcagcagatt tgcaagccac 180
aacgacatgg	caacaatact ggaataatat cgcataataca cgcaaacaga aacagatgga 240
aacatggggg	cttcgtcggt ccaaaagcgtg aaggagtggt ttctaatatt tctcgagatt 300
gcgggattcg	gtgtttgtgg atgatcccta ttattgcagt gtgggttggg gcaagagggg 360
tcaggttgac	tcgactcata tgattggaag gttggtgaat cacaattgaa agcgttgac 420
gagaggatgg	acaatt
	436

<210> 399
 <211> 419
 <212> DNA
 <213> Pinus radiata

<400> 399	
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tctgagaact	gattgtgtct tccttcggag ggagaggggt agcagagttc agaaaagag 180
agaaagagaa	agtagtccta agggactgtt taaaatgggg cgaggtccag tccagctgag 240
aaggatagaa	aacaaaataa atcgtaaggt acgcttttcg aagagacgga atgggctgat 300
aaagaaggcg	tcagagctgt caatcctgtg tgatcgcgaa gtggccttaa ttgtctcttc 360
caacaaaggc	aaactctatg agttctccag tccagtatg accaagattt tggaaagat 419

<210> 400
 <211> 690
 <212> DNA
 <213> Pinus radiata

<400> 400	
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aggtctgata	gactaacaag taaattgtca ggaagtcgta gttcttttcg ggcttcctca 180
agggatggga	tgctaggaac taaatttcta ggtagtgtga atggccctga gtgttaacaa 240
ccgatgcatc	atggtacgaa tgcaattgga gcagcagagc tctcaaacac ttaactcgtg 300
ttcaaatatt	ttaaagcagc acagcaatta ctgtgatgaag ttgtaaatgt tggaaagggt 360
atcaagctcg	attcagtcga ccatcaaaaa tcccaaacat ggtttgtgtg aatatctgac 420
aaaaagaata	ttgcaactga agctactaca aatgaccgaa caacatctgc aataacagga 480
gcttcaattt	ctgcagaagt aatgaaaaac gagcatgctt ttggactcac accagctgat 540
agacaagaac	ttcagatgaa aaaggcaaa gtgtgtgtgca tgttggatga ggtggatgca 600
aggtacagac	agtactatca tcagatgcaa atcggtgtgtt catcgtttga gaccgcagct 660
ggatttgggg	ctgcgaagac atacattctt
	690

<210> 401
 <211> 383
 <212> DNA
 <213> Pinus radiata

<400> 401	
ttctgcggc	ttttttccct gcaactcacca ctctccatcgc cattgctgga accctagaag 60

accagctctct	ttctttttta	actcaggagt	taaatcgcaa	tacaaaactc	ctgtgctgga	120
ctctattgta	tcatagtatt	cagcaagaga	ggccatgggg	cggggaaaga	tcgagctgaa	180
gaagatcgaa	agcacaagca	acaggcagg	gacgttctcg	aagcggcgga	tgggggtgct	240
taaaaaggca	caggagcttt	ccgtcttatg	cgatgcagag	gtcggcgcta	tcatctttctc	300
taataccggc	agactctacg	acttctcgag	ctccagtatg	gagaagatga	ttagaaacata	360
ctatcgattt	attgaaaaaa	atg				383

<210> 402

<211> 846

<212> DNA

<213> Pinus radiata

<400> 402

atcaaatcta	actggatata	caagtgtacc	gttatttggg	tacttttggg	cgcaggatgc	60
ttctatcccc	attttgtggg	aggaaattac	tcagcccata	ctagagtgtg	atcctttggg	120
gatagacttc	ctaccattgg	atttgtgtct	gttgccaggct	gcataatgtg	tttccatttt	180
gcgcattggt	ttcttgaatc	tttaattgcta	gttttctctac	ttttgtatgg	cccttttaggt	240
aaacttgggt	ttagtttttac	aggctcttga	tcgggggtgaa	aagatagaac	ttttgtttga	300
caaaaacagag	aaccttcgat	ttcagggtca	agacttccag	aagcagggaa	cacaacttgc	360
ccgaaaaaatg	tgttttcaga	acatgaaagt	caaaactgggt	cttcttggaa	tgtctttgtg	420
gttgattctt	ataatctggc	ttctcaattg	ccatggattt	aagtgccatt	aatcttgatt	480
acttggcagt	ctttctcaga	tacaatcctt	tcgaggcatt	tatttctatt	ttttggcagc	540
ttggcttata	atagatgcag	gctctcttgg	aaaagagtat	cttttgggtt	gtgtctgagt	600
aatgtatttc	attcacttgg	atactctcat	cattagatgc	tgattatcta	tggttttctc	660
tgaaggaggga	caatgcctcg	actcttcata	gttttaggtta	ttggcactac	ccatcagctg	720
tgatgtcaat	ctcttttata	aatatgaatc	cctgcttttg	gttttcaatt	ttaacgttca	780
catagcctgt	attatcagca	gtgcttaatt	aacgcgggaa	acctttggat	aaaaaaaaaa	840
aaaaaa						846

<210> 403

<211> 333

<212> DNA

<213> Pinus radiata

<400> 403

gccaaattcg	cgcctctgatg	gaaatgggaa	ggctgacccg	agtatttcta	tgggaacaga	60
agctcgaaac	cgaacaagat	tttggcgtag	aaggggaaaga	gtacgggagc	tgaagtacac	120
ttggaaagtc	gctggtctac	cctcaataaa	aaagcgaaatt	gctgatagca	aagatcagcc	180
atgtaggcag	tttacaccat	gtgattgtca	atccatgtgtg	ggaaagcaat	gtccctgcct	240
acgtagtggg	acttgtttgtg	aaaaataactg	tgggtgttgc	aaaggctgca	agaatcgttt	300
ccgaggtatg	cactgtgcaa	agagtcattg	tcg			333

<210> 404

<211> 881

<212> DNA

<213> Pinus radiata

<400> 404

cgcctctcag	ttctctggta	acgatatgag	taattatggt	gctaaagaag	ttacttcagg	60
gttggctacc	ggcggtcaac	ggcgccagc	tctgcagcta	aacctccagc	cccttgatag	120
cagcggagat	ggcgagccg	ctaaagaaaa	acgaacgcgc	aaggttaatc	cgtattatct	180
taattacagag	tttgtaatgg	ggaaaggataa	gatgccgcgc	ccgccaccgc	ataataagaa	240
agggggaaatg	aagagaactg	ctcagggcaa	gtcagaatgt	agggaaacaa	agagacctgt	300
tgcctctacc	atgaacgcga	agatactgca	agatgtcatg	aaacagtgcg	gatttctgct	360
atccagctcc	atcaaacaca	agcatggctg	gggtttttaa	gcccccctgg	acactgtagc	420
gctcggcctg	catgattata	acaccattat	aaagcagcca	atggatcttg	gtactgcaaa	480
ggcgaaagcta	aatgcaaacg	agataaaatc	gccacaggaa	tttcaggggg	atatcagatt	540
gacgtttaac	aatgctatga	cctataacc	aaatggacat	gaagtctata	tcatggctga	600
cgagatgttg	cagttttttg	aggaccgggtg	gaaaccgatt	tgtgataggt	atgaagagga	660
gaagaggaaa	ttgtcatggt	cagtataatga	tgggctatta	cctggggcaa	gccaaaatat	720
gaagaatttt	ctcttttggtg	aaaccccaaa	gaagaatttg	aagaagacgc	agcctctctt	780

ggggttgcgc ccacggcctc caccataatgc aaagtcacag gctaatacaga ctttgcgagc 840
ccctgctccc aaaaaccca aggcacaaaga ccttcataag c 881

<210> 405
<211> 434
<212> DNA
<213> *Pinus radiata*

<400> 405
gaaatttgat atagtgttta ctagtcttga aatggcaatt aaagaaaaga ctgcacttaa 60
acgtttcaggt tggcgatata ttattattga tgaagcacat cgaataaaga atgaaaaattc 120
acttcttgca aagacaatga gaatctacag caccaactac aggcctctta taactggcac 180
acctctctcaa aacaaactctc acgaactctg gtctcttctc aatttcttca ttccagaaat 240
ttttagttct gtctgaactt ttgatgactg gttccaaaata tcagcttgaca atgaccaaca 300
agaagtgggt caacaacttc ataaggttct tcggccattt ctctacgga gactgaagtc 360
agatgttgaa aagggtttgc ctccataaaa ggaaaccata ttgaaagttg gaatgtcaca 420
aatgcaaaag caat 434

<210> 406
<211> 450
<212> DNA
<213> *Pinus radiata*

<400> 406
aagctcggta attctgttca tagagcaaat ttaagttcaa cgcctgccca tactcagatt 60
ttgggatttt gctgaaaatg gggcgcggtta aatagaaac caagaagatc gagaatagcg 120
tgcgacggca ggtgaccttc tggaaagcgc gatgaagaaa gccttcgagc 180
tttcagttct gtgcgatgca gagtgggcgc tcatcgtttt ttctggcgca ggaagactct 240
acgaacttga aaccagccac agcaacagga acaagtatgc ctgaccatat tcaacttcta 300
ctacacatca atgcccgttg ttttaattca catttattga tcatgaattg ttgcttttgc 360
ttcttctaatt gttctaggcg ggctacattt aatttagagg gttcattctg gaatctgact 420
agccatcagt ttctattctg tgataaggga 450

<210> 407
<211> 376
<212> DNA
<213> *Pinus radiata*

<400> 407
cttgggtctca acttacagac tgcgtgact gtgatattat ttgatagtga ttgatgctaa 60
ggttatccag gctggctctt tcaacaacac ttccacggct caagatagac gagagatgct 120
ggaggagatc atgcggaggg gaactaactc tttaggaaca gatgtgccta gtgaaagaga 180
aataaatcgc ctgtctgctc tagtgacga agaatttttg ctcttttga aaatggatga 240
ggaaaggagg caaaaggagg ggtatcggtc aaggttaatg gaggagcatg aagttccaga 300
ctgggtcttt tcagtcctca caggaaagaa tgacaaaggt gttgaaaata tggattccaa 360
tcttggtttt gaccag 376

<210> 408
<211> 551
<212> DNA
<213> *Pinus radiata*

<400> 408
aggcgatag tcccatttc aatgaggcgg atgcaataaa atccaaaata ttagcccatc 60
cacagtatcc gaacttggtt ggagcttaca tgcactgtca aaagattggg gctcctcccg 120
aagttgcggc gcgtctagat gcgcttagcc atgaatacga aaaccaacaa catcggtcga 180
gtctgagcat cgaatgggac ccagaactag atcaatttat ggaggcttac tgcgaatagt 240
taactatcaa accagaggag ctccaaaagc atcgatgtca tttttgaaga 300
agattgaagc ccagctcaat tccctaggca aaggaacaat acgaatttct ccttcagccg 360
agaatgatga aaagaccgag ggaggtgcat ctccagagga ggtcgaggat ggcagtggtg 420
gtgaaacgga ctttcaggaa gtggatcacc atgctgtaga agatcgggaa ttaaaaagatc 480

atctccttcg taaatatagt ggatatctga gtagtctaaa gcaggaattc atgaagaaaa 540
 aaaaaaaaaa a 551

<210> 409
 <211> 366
 <212> DNA
 <213> Pinus radiata

<400> 409
 tgtaagaatg tttttactag attgcaagga ccagtcgaagg aaggacgaca cacagcactg 60
 tttatggaga ttccaaagag aaatgagaat ccacttact ataggcttat agagaacctc 120
 attgatgctc gaacaataga acaacgtctt gaccgctttt catatgggag tgtctctgac 180
 ttgtctgcag atgtgcagtt gatgctggag aatgctatac gtttttatgg tcaactctctc 240
 gaggtcaagg caaatgcaag gaggcttcaa gctctctctc tccagcgatg ggctgatctc 300
 ttccagatg ataattttag ctctttttaa actcgaggct tgggtgtctc tgggtcaaatg 360
 gcaaat 366

<210> 410
 <211> 346
 <212> DNA
 <213> Pinus radiata

<400> 410
 ctggttaaat ctggtatggc ttttgggtgca aaacgatgga tagcaacttt gcagaggcaa 60
 tgtgagcgtc tcgcaagtgt ctgggttagc aatatcccat caagggacct tgggggtata 120
 cctagccctg aaggagagaa gagcatactt aagttagctg agcgcgatgt cacaagcttc 180
 tgcgtgggtg taagtgcac aactgcacat acttggaaca ctctgtctgg aagcgtgtct 240
 gaagacgttc gtgtgatgac cagaaagagt gtgatgatc caggcaggcc tcccgcatc 300
 attcttagtg ctgcaacatc cctctggctg cctgtgcccc ccaaaa 366

<210> 411
 <211> 393
 <212> DNA
 <213> Pinus radiata

<400> 411
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 agtgtggtaa atttggtttg ctagagagggc tattaaaaca ttgaaagct caaaaacaca 120
 agatgttgat attttctcaa tggactaaag ttcttgactt gctggaatcc tatctaagtg 180
 agagaggata tgagggtttg cgcattgatg gaagtgttaa gttggaagat agggaaaaatc 240
 agataaggga tttcaatgac ccagatagca acttttgat ctltttgcta agcacacggg 300
 ctggtgtctc tggaaatcaat ctactgatg cagacacttg ttttatctat gatagtgaat 360
 ggaatcctca aatggatatg caagctatgg atc 393

<210> 412
 <211> 830
 <212> DNA
 <213> Pinus radiata

<400> 412
 gttaaagcttg gaacgactaa cacttggctc agcagagcgg tctcgggaca gcacagggcg 60
 cagcagcagc agcagcagca ctacgcggaa cggagcgtgg aagagggcag gaaatggtgc 120
 ggctgcgcgg ccggctctcg cgaactgtatt cattctaatt tcttgaagct ccagaaacctg 180
 gcaagtgcgg gttcagagct cgcgtgccgc aacgcgctgt ccggcagatg gctaagtccc 240
 ggaacttttc tgaacgacaa gattgagggg agggaaaggg tgcagctact tggagagaaa 300
 attccgggag agtctattat gccattatcc gcacaattta agactgcggg tcttctgtcg 360
 ccagaaaggg ggctgttgaa tcttcattcg gccgatgctg tgaatagcaa cggagaacct 420
 gtgatagcg gagggggcgg ttgagataga gacggagggg aggagggcga ggaatcatga 480
 gcgtgtggtc aaagcggcag gataaaagct gacattgtct cacatccgtc taccagccag 540
 ttactgtccg cacacttga gtgtcttcgc atagcgactc cgaaggatca gcactcgatg 600
 attgacgcgc aattagagca gtgcagcat gtgcgcacca aatattccgt ccttgggcaac 660

gataattttc	tcgtcgccga	caagaaagaa	ctcgatcagt	tcattgacaca	atatgtttttg	720
ctgcttttgt	ctttcaagga	gcagctgcga	tatcacgttc	atgttcattgt	tatggaagcc	780
gtgagggcat	gcattgacct	tcagatttct	cttctaacac	taacaggagt		830

<210> 413
 <211> 371
 <212> DNA
 <213> *Pinus radiata*

<400> 413	
aagctgtgca	gtacagttct
ccagatttaga	atcctagaaa
aatcgaggac	attacagcac
ctactgggtt	cagaaccaca
gcaccaggtg	gctgctactg
taatgaacct	cacaagccca
agcaatgtct	g
	60
	120
	180
	240
	300
	360
	371

<210> 414
 <211> 395
 <212> DNA
 <213> *Pinus radiata*

<400> 414	
gagcactcaa	aatggggaag
gccaggttac	tttctcgaaa
ttctctcgca	tgctgaagtc
ttgcaagcca	cgacgacatg
atggaaacat	ggagtcgtcg
aagttttaac	ctgcaaaata
cccaagttaa	agtgaatgt
	60
	120
	180
	240
	300
	360
	395

<210> 415
 <211> 413
 <212> DNA
 <213> *Pinus radiata*

<400> 415	
caaatctctg	tactccacct
ctggaataag	gcgtaaaaag
acattgggga	tgaagatggt
tgaccttaga	gcaagtggag
cagagaagaa	aatgcaatta
ggtttcaaaa	caggagagca
tcaagcagca	ctatgattct
	60
	120
	180
	240
	300
	360
	413

<210> 416
 <211> 355
 <212> DNA
 <213> *Pinus radiata*

<400> 416	
ggagcaccca	aaatggggaa
cgccaagtta	ctttctcgaa
gttctctcgc	atgctgaagt
tttgcaagcc	caacagcagt
gaaacagatg	gaaacatggg
ttgaaagcgt	tgacagagag
	60
	120
	180
	240
	300
	355

<210> 417
 <211> 661

<212> DNA
<213> *Pinus radiata*

<400> 417

ctctctctctg	cagagccata	ctctctcaat	atgcttttgc	tctctttctc	gttttgaatt	60
ctcccgctctc	tgccataagta	aattctcaca	ataatatata	cagccattct	ctccatattt	120
ccgtaatcgg	atgatacttc	tggtttttct	gttgcgtgca	tcgtgagaaa	gatttgcgtt	180
tgtgtgtttg	ctgaggaaat	ttagtgtttg	tagactctcg	aagcgtatag	ctgagagctc	240
ttaaacatgg	gtatattggc	ttgctcaact	ggatcccgta	tgccctactc	gtggagcaca	300
agctctcttc	gtcacaaagca	ctttctctag	tagagctatt	atcagaagaa	ctttaggaag	360
caagggttag	ttgtctgtat	taaaataaaa	tggcgctcaa	tgggattatg	ttcaatgctt	420
ccaatcgaaa	tttgatcgct	aaggtgaatg	aagctccatc	cttcgaagct	aattcaagtt	480
tggtatggag	gatgaagaat	gtgtcaaaag	ggccatttcta	caatacactt	gatgcagacg	540
aagcagggga	tgaggatttg	ctggacgagt	gcgttcatac	gccaggaag	aaaaaagac	600
ttctcgtaga	gcaagttcgc	tttctggaaa	agagctttga	gttggaacaac	aagcttgagc	660

c

<210> 418
<211> 323
<212> DNA
<213> *Pinus radiata*

<400> 418

tctagaacga	agcatagac	aacagcgcgc	atttcaccac	ttaggattga	tggagcagca	60
cccttggcga	ccgcagacag	gacttctctg	acgctctgtt	tctgtttctc	gtgcatgggt	120
gttttgagcat	ttttctgacc	cgtatccaac	tgatgcagat	aagcatatat	tggctaagca	180
aactggccct	acaagaagtc	aggtatcaaa	tgggtttata	aatgccaggg	ttagactatg	240
gaagcccatg	gtggaggaga	tgatcatgga	agaactcaag	gaagaaaaag	tggaccaagg	300
tacacacaat	tctgaagctg	aaa				323

<210> 419
<211> 1571
<212> DNA
<213> *Pinus radiata*

<400> 419

gtgtttttct	gtacagtgtg	acatggatat	ctgatgttgc	ccacagtgat	tcttatggat	60
catacatata	tatatattcaa	ccaggtctga	tatatatttg	tgggaatcat	atctaatact	120
gaaagcattt	gctttctgct	gctgctgtga	tctattccta	tgtttctgtat	tcgaatatga	180
tagattacct	ttactcatat	gaagcctctg	ctgcgtctag	ttagtgtatt	tatgtttcag	240
tatatattct	attctgctca	tgccgggtat	tttatgctgt	ggatatggtc	tgggaattaa	300
gagtaaccca	ggctcaagag	gccgaagctc	ttagaattctt	gatattttaa	tggtttatctt	360
tttaacgtcg	ttttgagatt	gacttggcct	tggcgtgatt	ggcggatcat	gtgtggaagaa	420
gatttttgtta	ttataaatca	agttttttta	tacatgatca	tgcccaacgc	aaattgtaat	480
gagtcattggt	cctaattggt	gccattctta	cagtttgtag	gagccaggca	ctcttcttgt	540
agactttgag	gcagcagctc	tgttgttctt	gctattaagg	gatattggcta	tgagcttaatt	600
agaattgagc	gcaacaatgg	aaacgaatct	cttaacgcag	caacaatcag	gttgccatga	660
tgctgaagag	gactatgatg	gtggttattg	agtggtgatt	aaataacaga	cccccaaca	720
atagaacaac	aacatcagtt	ggatgctggt	tatagttgag	acagttgggt	ttagactgtc	780
aaactgaaga	catttgatgg	caatggattt	gagtcagaat	ggctgcatag	cagtggttat	840
actttgatatt	agctggggtt	gtgggtgatg	atatattggca	gccgtgggtt	tggattttca	900
tgggagtggt	tgtctgatca	atatatggca	gtttctactt	atttggtgata	gtatttcaaca	960
aaggggatag	cctatatgga	agtagtttta	taacccatggt	tatggattta	agtttgatca	1020
attgtatgaa	agtgtgtgta	tggtcttagt	taagggcacg	aggtataggaa	gcctctggata	1080
tggaacttcag	cttggtggct	gtatgacaact	gggtgccttt	atatgcttaa	ggatttgagt	1140
tggtttcatt	gatttcattt	tgttgacagt	aatttgagaa	gcaatccggg	gatgaatcta	1200
aacgatcata	cttacaattt	atcacctatg	gctaattcag	gaatccctga	agagcagatt	1260
gatgaggatg	cagtggtgat	ctttatgaac	taccaaccgc	agtcataaaa	gagaagaact	1320
acagtagaac	aggtgaggtc	tttagagagg	agttttcgaa	tcgagaccaa	ctggaacca	1380
gagaaaaaga	tacagtggc	tcaagagcct	ggacttcaac	ccgcataagt	agctatttgg	1440
ttccagaaca	gaagggcgag	atgggaagacc	aagcagcttg	agagagatta	cagcgttctc	1500

aaagctagtt atgatgcttt aaaatctgat ttgagagat tgcagcagga aaacaaaaat 1560
atccgtgccg a 1571

<210> 420
<211> 339
<212> DNA
<213> Pinus radiata

<400> 420
gattatctca tcacaaaaat ctttaatttg ctctttgaac cattctgcat catgtttaca 60
ataagtacct gtacaaactca cgcacaatct ctgatatata gttttgttgc gaggggcacc 120
gtggtgcttg cggagtagac ggaattcaaa ggcaatttta caggattatgc cgctcagtggt 180
ctgcaaaagc ttcccggcag caacaacaag ttacacatac attgcgataa tcataccttc 240
aactaccttg atgaagatgg ctctgcatac tgtgtttgtg cagatgaatc cgttggaagg 300
caagtagcaa tggcattttc ggagcgtgtt aaggaggat 339

<210> 421
<211> 332
<212> DNA
<213> Pinus radiata

<400> 421
tgggtgccca ggcaatatct atgatgacga tgaagaagaa gatgaggagg agtgcagcgg 60
gactgggcag caaacgagga agaagaggag gctgagcttg cagcagggtga gatctctgga 120
gaaaaccttt gaggttgaga acaagcttga gccagaaaagg aaattacaac ttgcacagga 180
attgggcttc cagccagagc aggttgcgtgt ttggttccag aataggcgtg ctgcctggaa 240
aaccaagcag ctgcagagag attacggaca gcttaaaact aatttcgagt gccttaaatc 300
gaactctgat gccatcaagc aggaaaacca ga 332

<210> 422
<211> 461
<212> DNA
<213> Pinus radiata

<400> 422
ctgaagtgcc gtcgattgtt cgggaggata gcgttttcga agttcgttgt tgagttatct 60
cgcgagactg tagaatttta gggttgtttt ccacaaaccg acttttcccg acttcaaatc 120
ttgatattga agtgacatgg ccggcgagaa aagaaagatt aatagaatag ctaacgcttc 180
ggccaggcag gtcaccttcg cgaagaggcg gagggggctg ttcaaaaaag ctccaggagt 240
atcgatttta tgcgaagcgc atgtagccct cctcgttttt tctcaactg gaaagctgta 300
ccagctaccg agctccagca tgaatatgat attggaccag tatattttgt attctagatc 360
aattcaaaa gatggaagc caaatctgga ggagagtcac gatatacaaa agataaaaaa 420
acaaattaaa gatattagtc aaaatttgag aaaactgcgt g 461

<210> 423
<211> 622
<212> DNA
<213> Pinus radiata

<400> 423
ataactctct cctacatatt gccctcttct ttcctctctt ctctcatcag agtcaatttt 60
cccttgaga ttttacattc ttaagaaaca gatgggtatg gatattggag actgcaatac 120
agggcttggt ctgggaatga gtattggcct ttgggatgaat ctaattgagag aagaccttca 180
atctcacaga catcatgtca atggccctcc tgtgcagttg gatctgctgc cttagctcc 240
agtactgcgc tcccgtagct tgcattgggg gaagacttca cccgggactg atggcgagag 300
atcggcgagg gaatcgaaag caacctgccc caggcgaact gatgtgaaca aatggccgcg 360
ttcctgttac taacaagaag acacgggcac cattaatgtg tcgtccccaa acagtgcctc 420
atcgtctgtt catgtggact ccggtggcgc gatcaacgct gagagcagct gctacggcat 480
gagcgtcaag agagagcgcg aagccaccga ggaattggag gcggagagag ctgtctctag 540
ggttagcgat gaagaagctg atcaggaggg cggcaccagg aagaaactca gattgtccaa 600
ggagcaatcg gctcttttgg ag 622

<210> 424
 <211> 373
 <212> DNA
 <213> Pinus radiata

<400> 424
 attcacaatg ggaagaagt tggagctgaa acgcatccaa aaccctaata gttcacgtga 60
 ttccttctcc aaatgcaaga ggggactgct aaagaatcg gtcaagctct ttgttctctg 120
 tgatgctgaa gtttccctca tcattttatc tgaaccgcgc aagatttacg agtttgcagg 180
 caacacagtc tgactagctc ttgtgaattc ttctgatcaa gttagagatc catatactga 240
 tatataaaag catactttca cattgcaatt ggagcagatc tagatgcaga agtgcaacct 300
 tattataact aaagccatc agctgcaaat caagaccatc ttctctatct ttgagatcgt 360
 gatacagagt ctg 373

<210> 425
 <211> 440
 <212> DNA
 <213> Pinus radiata

<400> 425
 ttcgatttca ggctcaagac ttccagaagc agggaaacaca acttcgcca aaaatgtgg 60
 ttcagaacat gaaagtcaaa ctgggtgttc ttggaattgt ctttgtgttg attcttataa 120
 tctggctctc aatttggcat ggatttaagt gccattaatc ttgattactt ggcagctctt 180
 tctagatata atccttttga ggcatttata ttcatTTTTT ggcagcttgg ctataatag 240
 atgcaggctc tctttgaaaa gaggatcttt ttgtgtgtgt ctgagtaagt tatttcattc 300
 acctggatc tgctatcatt agatactgat tatctatgtt ttctctgac gagggcaaat 360
 gctctgactc ttcatagttt aggttatgtg cactaccatc cagctgtgat gtcaatctct 420
 ttataataa tgaatccctg 440

<210> 426
 <211> 280
 <212> DNA
 <213> Pinus radiata

<400> 426
 gtttcaactc ttctgccccg tctggatttg gctgcactga aatacattga acattggagt 60
 tgcagagcgc gagatatggg tcagcagtc ctcatctaca gctttgttgc aaggggcacg 120
 gtgtgttttg ccgagtacac ccaattcacg ggcaatttca caacaattgc caatcaatgc 180
 ctccagaaga ttctctgccg caataataag ttcaactaca attgcgatcg tcacacattc 240
 aattatctcg tcgaagatgg ttcacatact gtgtgtgtgc 280

<210> 427
 <211> 539
 <212> DNA
 <213> Pinus radiata

<400> 427
 caacacgcaa gccgatttcc aaagatggat agggagaaaac tcatgaagat ggctgtgtgca 60
 gtccgcactg gcggaaaggg tacaatgcga aggaaaaaga agacaattca taagactgcc 120
 acggcagatg acaagagact tcaaatgacc ttgaaaaaga taggcgtgaa taacatcccc 180
 gctat tgaag aagtcaatat ttttaaggat gaccatgtta ttcatTTTgc taaccctaaag 240
 gtccaggctt ctattgtctc caacacatgg gtggttagtg ggtcatcgca aacaaaaaaa 300
 ctccaagatc ttttccctgg tatcatcaat cagcttggac cagagagttt tgccaactcg 360
 aggaagatg cagaccagtt tccaagaccg gaaccaaacc ctgcacaggg agaagatgat 420
 gatgatgac atgtaccaga gctcgttgaa ggtgagacat ttgaggaac agctaagaaa 480
 gactcctctt aaattttaat agatgagggg gcatgggatg tggacaacgc tagactgaa 539

<210> 428
 <211> 1020
 <212> DNA

<213> *Pinus radiata*

<400> 428

cattagcgca	aattcattcc	cctttttggc	tcctgccgag	cttgggcaga	ttacagagaa	60
accctagctc	cgtggattct	cgatcgaaat	ctgcacggcc	tgtatacagt	cttagcacat	120
tcactgagct	gccataggtt	tcttggaact	cttttttcgc	cggtctcttc	gagtttca	180
gggttttgg	tgattgtatt	ttgaggggtt	ttctttcttc	gaggggtttg	ttttccgctt	240
ttgtccctc	tattctttca	agacatctca	gaatgatgca	gccagccgtc	ggtgtgtctc	300
ctccccctc	tggtgtgcga	cccgcaatgg	atccccagca	gcagcaacag	caatggatga	360
tgatgcagca	gcagatgcag	cctcagcagg	ctcagcctca	gccgcctcct	caggctgggtg	420
tttggccccc	gcaacaccaa	ccccaaaccc	agcatgccca	atcgacgctt	atggctcagc	480
aatacccgca	gcagccgacc	tcagctgacg	agattagaac	ctgtgtgggtc	ggagatttgc	540
agtatgggat	ggatgagact	tatctgcagt	gttgttttgg	taatagccaa	gaggtgtgtt	600
ctgttaaaat	tatttcgaat	aaacagactg	gacaatcaga	gggttatggc	tttctagagt	660
ttgcaagcca	tgacaggagc	gagagagctt	tgcaaaacta	caatggtgca	cagatgccca	720
acactgaaca	atttttacagg	ataaattggg	caaccttttg	cattggagaa	aagcggcctg	780
agattggacc	tgattatcct	atatttgggt	gagatttagc	atctgatgtg	acagactatt	840
tggttcaaga	gacattccga	actagatacc	aaactgtaaa	aggagccaag	gttgttactg	900
ataggggttac	agggcggttc	aaaggatatg	ggtttgttaag	gtttggggat	gagaatgagc	960
aagttcgggc	tatgacagag	atgaatgggg	tgttttgttc	ctcaagacct	atgcgaatag	1020

<210> 429

<211> 246

<212> DNA

<213> *Pinus radiata*

<400> 429

gcctcttttt	gttttaggaga	aagacgcctt	ctaacaggac	cagagcattc	tatatattgta	60
gcagattttg	ctccagatgt	cacagattat	ctgtttacaag	agacgttttc	atctcgatac	120
acatctgtga	gaggtgcaca	agttgttaaca	gatccatcca	caggccgttc	aaaaggttat	180
ggatttggta	agtttgcgtg	tgagaatgag	agaaatcgtg	ccatgactga	aatgaatggt	240
gtttat						246

<210> 430

<211> 323

<212> DNA

<213> *Pinus radiata*

<400> 430

caaggcaaga	gccaaagtcta	aagaagcaga	ttatagagac	atcagagaaa	gccatagttt	60
tctcccagtg	gactagtatg	ctggatttgc	ttgaggttcc	actaaaaaaa	tcgtgtatac	120
aataatagaag	gctggatgga	actatgtctg	taatagcacg	ggataaaagct	gtgaatgatt	180
tcaagacact	ccctgaggta	actgtttatga	taatgtccct	gaaagctgca	agtccttgata	240
tcaacatggt	tgctgcaagt	catgttcttc	tgctgtatct	ttgggtggaa	tcccaacaa	300
tgaagaccaa	gctattgaca	ggg				323

<210> 431

<211> 414

<212> DNA

<213> *Pinus radiata*

<400> 431

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tcgaggggga	gaagtcttcc	atggcgccgc	cgcccagaca	gagcgacctg	cagcagcacc	120
accatgtgaa	cgaagcgatc	ccgatcccat	atggccattc	gccccacggt	cctatggctt	180
accacgtgcc	cgaaggtgcg	agcttttcggg	catggaaagt	gactgtggcg	gttctatttt	240
gttatctgaa	agaagtgtata	gagatggaaa	tggtgtcatgg	taatggagac	tgtaaaagttt	300
aaactgtaaa	atgtaaaagt	gaattcctct	ctgatgttca	gtgtttactt	tttttgaatt	360
ttattttttg	cccccttttg	cattgtacag	tctgtagctg	tgcatgactg	actg	414

<210> 432

<211> 525
 <212> DNA
 <213> Pinus radiata

<400> 432

ctgaaatattc	gttaaatctca	ctcttttggg	ctcagttact	gcgtcgccaa	tatggaaaat	60
ctccccaatc	agcaacctga	ccttgaaatt	gctcaaacac	acgaggatcc	cgggtcccg	120
caatttaagg	gaattcgact	gcgaaaatgg	ggaagggtgg	tatcggaatc	ccggatcccc	180
aaatctcgag	agaaaatag	gctgggctct	tacacgaetc	ccgagcagcc	tcgccgtgct	240
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gtgcaegaca	ttccgtctgt	gaattctgtt	tcctgcagcg	aaattcagca	cgccgccctc	360
aaatgatgct	tggggcagcc	ccctccgagt	ttgcagcttc	tggaaaggca	cgccgccctc	420
aaatgatgct	tggggcagcc	ccctccgagt	ttgcagcttc	tggaaaggca	cgccgccctc	480
aaatgatcat	tgggcagccc	ccctccgagt	ttgcagcttc	tgcaa		525

<210> 433
 <211> 1196
 <212> DNA
 <213> Pinus radiata

<400> 433

ttcgcttcgc	aacataagcg	cggttccagc	gttcgttaaca	aaattttgtg	gccccctttt	60
atcgggagat	cgcggttccg	agtccgttct	tgtgttttct	ccgcgtccgg	agcaactcagt	120
tcagggtccc	aaaaatgat	cggtttccgt	caaatctcgt	taattttccg	ggacgacttg	180
ctagttgtat	ggtttttaatt	ttttttttca	acgaagaaaa	gtatttaaaa	ttccagcattt	240
tacagttttg	aggctcatag	accgagggaa	ttgcgatata	aagcaacctt	ctgcccttta	300
gctggcaccg	gcagcagaac	gggttggaat	ggagttttag	aagatcaga	ttgactattc	360
gctgtagaaa	aggcaagagc	ctgtctgaat	ccgcatttga	gctgccagat	cttgatttct	420
aaggcaaaaa	ctggggcgag	aaagatttcc	acggccattt	agaaaacgga	ggctcaaggga	480
ccatttattt	gcaataaaat	ttctcggatc	gtggctatgg	ccttcaccgg	aacgcagcag	540
aagtgcgaag	cttgtgacaa	aaagggttat	tttgtggatc	aactgtccgc	ggatggagtt	600
ctttaccaca	aggcttgctt	cagatgcaac	catgttaagg	gaacgcttaa	gctgagtaat	660
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agcgcgcaat	ttacaagaaa	ctttcagtc	caaagatcaa	gcaaaagcaat	tgacggtctt	780
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tcctaccaca	agtcttgctt	caggtgttct	catggggggg	gttcaactcag	tccttctaatt	960
tatgtctcac	tgaaggcat	actgtattgc	aagcatcatt	tttccagctt	tttcaaggaa	1020
aagggaagtt	acaatcatct	cattaagact	gcttctatga	aacgagcagc	tgcaagctct	1080
gaggtagcaa	gtgcagttcc	tgagatataa	ttttactgtg	atctagttaa	ttcaattacca	1140
tttgtgtttg	ttgtttgaag	agtttacacg	gtatgctagt	tttgtgggga	aaagag	1196

<210> 434
 <211> 726
 <212> DNA
 <213> Pinus radiata

<400> 434

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ttcaaatccc	gcacgatcac	actcccttct	tttaaacatt	cgagttcgaa	tccccggaaa	120
ctttctcgaca	tggttaagcc	ctcgcaaaaa	cagaatatcc	atgtcaatgg	caagccggaa	180
agccgctcac	tgatgtccgc	gcaattcaag	ggaatccggc	taaggaaatg	gggaaaatgg	240
gtgtccgaaa	ttcgaattgc	caattgcagg	gccaaaaatt	gggtgggctc	ctacgaatcc	300
ccagagaag	ctgccgcgc	ctatgacttt	gcagcgtatt	gtctgagagc	atccaaggcc	360
aggttcaatt	ttcccgactc	accgcccga	attccttgcc	cctcttctct	atcgccgtgc	420
caaatcaag	ccggtgcggc	ccggttcgcc	gcagaagaat	tcagatgcct	gtcagatgac	480
gacacggcgt	catcgtcctg	cggtttcgaa	gcgggaatcc	acttgccgcc	ggaaaattcca	540
tgccgctctt	ctgtatgcgc	gccgccaatc	gcatcatcgt	cctgcggttc	ggtaacggaa	600
gaattccggg	tgccgtcaga	tgaggacacg	gagcagggtt	ggcattttg	ggattcaacta	660
tccaacattg	acagccaaca	gatttcggcg				720
ttcctg						726

<210> 435
 <211> 266
 <212> DNA
 <213> *Pinus radiata*

<400> 435

catcaatggc	atcgcttttg	ttccgcgagg	ctatgctgca	ctgccctgca	caatacacag	60
aagcaatgca	caaatctgc	agccacaggt	aaggcgagg	tcaagaggat	tcgtaggcaa	120
caggaggctg	ccccttcgc	gccagaggag	gcaactttga	atcagcaaac	tccaccgtac	180
agaggcgctg	gtcgtcgcaa	ctgggggaaa	tgggtgtccg	aaattcgaga	accgaaaaag	240
aaaaccggaa	tctggctcgg	ctcctt				266

<210> 436
 <211> 1775
 <212> DNA
 <213> *Pinus radiata*

<400> 436

acggacaga	gatttccaat	atcgcgctgc	caagtctttg	agtatacggg	acgattcccg	60
ccgtcgatgc	taattcgtat	aatctggacg	cggtctacaa	atcgctgccc	gactccaacg	120
ttttctccag	ttcggccagt	gaggaagttt	gaggggtcac	gttattgaga	gaggacgcta	180
tttggttgcg	atttcgagtg	ctgtaagcag	gcaacgacgc	ctgtttttct	ttagagttta	240
acagaaaaa	agaatgtgtg	gaggtgctat	catctcggac	tttataatac	cccctgcgag	300
ccgaggccgc	cggtgactgc	ccagggatat	atggcccgat	tttgataagt	tctctgagtt	360
tatttaatgca	gggtgctgcg	tggagtcctt	tgatgtcagc	gttgatgtcg	atgacgacga	420
ggaggattcc	gacgatgacg	agttcctcga	ttttgaggag	agctatcaga	acaagaagaa	480
gaagcagcaa	cagccgatct	ccccaccaca	gggtttcagc	cttcctttag	ctcggggctc	540
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gcaacgtcca	tgggggaaat	gggtgcgaga	gatcagggat	cccagaaaa	gcgctagggt	660
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accccgctgc	gcgagttttg	aaccgatgaa	aaacataaat	aaacgaaaa	ggataaattc	1140
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agtgaaaacc	cctgaaatat	cttctgtacc	aaaagccgaa	gccgactctg	atcattatga	1260
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gcttccctcca	tttaataatg	gtttgaacaa	atccccatg	gttgaagatg	gcgtcctgcg	1380
cgaaaaatcc	cctaatttgg	aggaagaatc	acagttggag	atctctgagg	ccttcgcttc	1440
tttgaatcca	tatccgtgtg	tgttccagat	gcgcgtattc	gagggcctcg	atcagtcgtt	1500
gcaggtgtgt	ggatgtggtg	acgcttcggt	tcgggacggt	gagaacagat	tgcagctttg	1560
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ttgtaaacag	taattagttaa	ttatgtaaga	atcaaggaga	cttgctatgg	cttgcgtttg	1680
caggccctcg	tctaataagg	aacttggtta	gatttttccc	cttttttttt	tttaaattca	1740
gtttgacggt	gccactgtga	tttaactctg	acatt			1775

<210> 437
 <211> 585
 <212> DNA
 <213> *Pinus radiata*

<400> 437

accttttggc	tacatcctca	ctatctttcc	atttggtaaa	gttgaagggg	accgagtggt	60
attttagata	aaagttaaga	catttatgaa	atccaaatct	aaaaccagca	aaaaccaaac	120
tcagtgctga	tctcatcgat	cagagtagac	cacaagtatt	tctggtgtga	atcacatcgg	180
agatggcatt	cgcaggaaca	cagcagaagt	gcaaggcatg	cgagaagacg	gtgtacgtgg	240
tggatcagct	cacagccgat	gggttcagct	ttcacaaagg	ctgcttcggc	tgcacatcatt	300

gcaatggcac	cttaaagctc	agcaactatt	cttcttttga	aggggtgctg	tactgcaaac	360
ctcacttcga	tcagctcttt	aagaggactg	gaagctctga	caaaaagttt	gaaggaaactc	420
ccaaaagctgt	gaaaaaatgag	aagttgaatg	atggtgagat	taagacaccc	aacagggtct	480
ctgctttgtt	ttctggcaca	caagagaat	gccttgcttg	tggaaataca	gtttatccca	540
ttgaaaagggt	ttctgtggaa	ggtgtgggat	accacaaggc	atgct		585

<210> 438

<211> 351

<212> DNA

<213> Pinus radiata

<400> 438

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tcacatgtat	gatttgggtt	ttttcacttt	tgggtttttt	cgatttctct	gggtgttttag	120
ggatggtgat	gatctcagaa	cagcggcgcc	aatgcggtgc	ctccgtttct	aaccaagacg	180
tatgacatgg	tggagacacg	ctccacggac	tcgatagttt	catggagccc	cgggaataac	240
agtttcattg	tgtggaatcc	cccgaattt	gcacgagact	tgttacccaa	gtactttaag	300
cacaacaatt	ctccagcctt	tgtcaggcag	ctcaatacat	atggcttcag	g	351

<210> 439

<211> 292

<212> DNA

<213> Pinus radiata

<400> 439

catgagaaga	aggcagttat	gtggaacatg	gataactctca	aagctaaagg	ttcccttgaa	60
gagcattcct	ttttgatcac	tgatgtcgga	ttcagtccta	attcaacgcg	cttggtctaca	120
tcctcttttg	acagaaacag	caaagtctgg	gatgcagaca	atccaaacta	taccttgctt	180
actttttctg	gtcactatgg	gtctgtaatg	ctctgtgatt	tcaccccgca	caatgaagat	240
cttatttgct	cttgtgacgg	ggaaagtga	gtccgttact	ggagtgttaa	cc	292

<210> 440

<211> 352

<212> DNA

<213> Pinus radiata

<400> 440

aatgggctat	ttacaggaac	ttgaagatca	gataaataggc	cttcaaaatc	ttgtgaaaag	60
gaatgaacgc	ttatatggat	ctggaaacac	cccttcttga	ggagttagctt	taccatttat	120
cttggttcag	accgcgtcac	aggcaacggg	tgaatttgaa	atctctgaag	acatgcagtt	180
agttcacttt	gacttcaaca	gcacaccttt	tgagctccat	gatgatgcat	atgtgctcaa	240
agcaatggga	ttttgtgaaa	agccatttac	tgatggtatg	gatgttactg	gccatgatag	300
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<210> 441

<211> 441

<212> DNA

<213> Pinus radiata

<400> 441

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ccaggccgag	ccagatttgc	aagtgcgtgg	ccaggccggg	accgtggacg	agctgcgcgg	120
cgctgcgcgc	cagatcgagc	cggacgtcgc	gatcgtgcac	ctgttgatgc	cgctgcgtctc	180
cgggaatcgc	gtcacccgcg	agctgtgcga	gctgctgcct	aggtgcgcgc	tgctgggggtt	240
gtcgcgcgtg	gtcgcgcgcg	ccgcgatcgc	cgagatgctg	cgcgcgcgtg	cgagcgggtt	300
cgccgtgaag	accacgcggg	cgccggacat	cctcgatgcg	gtccgcgcga	cgctggccgg	360
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cgcccccaca	tcgctgcgcg	a				441

<210> 442

<211> 1056

<212> DNA
<213> *Pinus radiata*

<400> 442

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atgagaaagga	ggggaggccg	gtgttttgagg	gttccagatg	ttccattacc	aaagaaaaaat	120
ccaggtaggt	cttcattcta	ttccttcaat	catggatccg	ccctactctc	agtaagctat	180
ataagatcat	ctattcattc	aatcaaatcc	attggagtgc	ctgttctcgt	atacttcttc	240
gcattggagg	tcttgggggt	tgaccttact	cgttcgttcc	tcgaagccct	tggccgcttc	300
ccatttaca	taacttgtgt	tggtgcggat	ttgcacatgg	tgtatgctgc	cgacccagag	360
gaaccccgga	tcgtatatcc	ttgtgactgt	aacaaaaata	ttcttgaggg	tttccgtac	420
ggcaagtgtg	agggcttggga	ttttgaccca	gatctgtgtt	gctgtttgat	ttccgcaagct	480
tggggagatg	aggatctcgt	ctttgtttgta	aatgtcgata	ttaccocaaat	cagattccat	540
tcattattag	gaagtatggg	ccgataatct	ggaagaggag	tttaattctga	tcagggaaat	600
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gaacagcgaa	cggggcgtag	actctcacct	cttcgcagag	ttgctcatgt	cgtctgggag	960
cgtcttgaat	gagaacgttc	gatggatcac	cttccacagt	ggctatgatt	tcggttacct	1020
gctcaagctc	gtaatgaatc	ggagcctgcc	gectac			1056

<210> 443
<211> 367
<212> DNA
<213> *Pinus radiata*

<400> 443

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gggagctcaa	caaatgcggg	tgttggggct	gttctatcgt	gtgggtcaacc	atgtggagct	180
ctgtcagggg	gcgaaaagca	tacttgcgag	caagagtgtc	accaggagcc	ttgtccacc	240
ctcgatagct	tagatgttgc	aaagtgcctat	tgtggtagac	aagaaagggg	gagggcatgc	300
gggacaggta	tagtcgagac	ctgtgtagta	gaaggagagg	gttctctggga	aggcagatgg	360
caatgcg						367

<210> 444
<211> 553
<212> DNA
<213> *Pinus radiata*

<400> 444

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ttattgtctc	tcaagacctc	tgcgaaattaa	tgaagctaca	ccaaagaagt	ccttgggatt	120
tcacaaacct	tattccatga	aaggttaacta	ttacacacag	gcataatggg	gtgcagttgc	180
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agatccaaat	gcgacagatg	aagatctgag	gcagggtttt	ggggccatag	gagagattgt	300
gtatgtgaaa	alaccagtg	gcaaaggatg	tggctttgta	caattcacca	acagggtccc	360
tgccgaggaa	gctttgcaaa	agttacacgg	caactgttat	ggtcaacaa	ctattcgctc	420
ttcttggggg	cgatctccag	caaaacagca	gactgcgaag	tggggagtgc	agcctcaagc	480
agatccaaat	caatggaatg	gtgggtggagc	ttattacggt	tatgggtcaag	gttatgaagc	540
ttatggttat	gct					553

<210> 445
<211> 381
<212> DNA
<213> *Pinus radiata*

<400> 445

cgagtactctg	tctcctggca	aatcagctcc	tttttggctt	tgccaagata	tggcaataac	60
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ctctcaacaa	catcatatga	atgctcttcc	atataacgaa	cgcagtgaaa	aacgccccaa	120
atttaaagga	atccgaatgc	gaaaaatggg	gagtgggggg	tccgaatcc	ggatgcccaa	180
aaccagaacg	aagatatggc	tgggttccta	cgaaaacggc	gagcaagccg	ccgtgcttta	240
cgatgccgcg	tatatattgc	tgagaggccc	caacgcgcaa	ttcaactttc	cggacactgt	300
accttcaatt	ccgtcgccgt	tttctctttc	acgcaccag	attcagctcg	cgcgcgctag	360
atatgcccg	gaagcaatgc	c				381

<210> 446

<211> 516

<212> DNA

<213> Pinus radiata

<400> 446

aaagatagct	aggtgcgta	agctctcgcc	agttaaaaga	agtcacgaac	tacaagcgat	60
agtcactcgt	ttttgatgta	gtgccagaga	tgcactcaga	tagattccga	tgttttgggt	120
tctgtgtttt	aaccttggaa	ggttcaattt	tacagtttct	acgggaattc	tcatattcaa	180
tctgtttggc	agattgaact	aaagattttt	gtccgggtga	tttttggtat	aaattcaagg	240
tcgacgaacg	tgaggtgcta	gggtcttttg	agtttggtatg	gaacccatgg	acatcggttg	300
caagtccaag	gatgacgtct	cgcttcccaa	agcaaccatg	tttaaaatta	taaaaagagt	360
gctgcctcca	gatgtctcgt	ttgcaagaga	tgctcaggac	ttactgggtg	agtgtgtgt	420
ggagtttctc	aatctaatat	cttcagaatc	caatgaagtt	tgtggcgag	agggaaaaacg	480
aacaattgca	cctgagcatg	tgctgagagc	cttggga			516

<210> 447

<211> 396

<212> DNA

<213> Pinus radiata

<400> 447

gaaatatcac	tattttggct	tcagagtttc	tgcaaatatgc	caaatatgga	gaatgttccc	60
gagcaggaac	ctgacaatac	cattttctctg	ccacacgaag	atcgcggttc	ccgccaattt	120
aaggggaatt	gactgcgaaa	atgggggagc	tgggtatctg	aaatccgagt	gcccgatccc	180
agaaaaga	tctggctcgg	ctcatatact	acccttgagc	aggtgcgccg	cgcttacgac	240
gccgcagttg	attgtctgag	agggcgcaat	gccgaattca	acttttctgt	gccgcacatt	300
ccgactcgct	ctcccccttc	ccgtgagcaa	attcagcatg	ccgcgcgca	atatgccttg	360
ggcaagccc	cttccagttt	tcctcttttc	gcaggg			396

<210> 448

<211> 946

<212> DNA

<213> Pinus radiata

<400> 448

ggggagacga	gatctatcta	ccgccccctt	tgattatcatg	gtctcgggaa	acataacaag	60
ccctggtctg	atcagagagg	ctcagacaaa	gatagcggga	atgaattagg	ccgactaat	120
ttgaatcccc	gccaataacc	cgccgggagg	acgaggacga	ccactctccg	gcttaatttc	180
gcgcgctttt	ttataattaa	aaacataaaa	aggccgacgc	catgaacgaa	ccagacgagc	240
acgcgcgtgc	tcagctcgtg	cagaagcgta	gccaccgcgt	ggcggaaggtg	gttatgccca	300
tctcgtccg	tccgctggcg	gagaaatgcy	gcgtggagcg	ggaggaggag	aggaagcggg	360
cggcggaagca	caagaagcag	cggtccaaga	actggacgcg	agcggagacg	ctgaactcca	420
tccgcctgcy	agcggaatg	gagccgcggt	tccgcgcgag	cgcgcggaag	tcggagctgt	480
gggaggagat	cgctgaagcg	ctccgccgag	agagcgtgg	ccgagacgcg	cagcgttgca	540
gagacaagt	ggagaaatg	acggcgagct	ataaggaggt	ccgcgacggg	cagcgcgaca	600
ggcaggactt	ccggttcttt	gacgagctgg	acccgctgct	atctctcaag	cctcagaagg	660
cggcggcage	ggccgcgcgt	gccgctaccg	ccgcacggcg	ggcgaatttt	gtttccggcg	720
agactccag	caattttccg	actgacgacg	agatgacgga	agaagggttc	cctctgggga	780
ccggagaaaa	aacgactcca	agaggcctct	cggcgacgga	cctgagcgt	gttcgtgagc	840
tctcggaaga	cctggtgagt	cggcagcaga	ggtttttcgt	ggatctgctg	gattccatgg	900
agcggaaaag	ggaaatccgc	gagcggatcc	gcgaagaaaa	ggagga		946

<210> 449

<211> 1140
 <212> DNA
 <213> Pinus radiata

<400> 449
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 aaaggcgctc ggatggagggt ccagatttatt ctatttttgt gggagatttg gattcagatg 180
 tctcagattt ggtcttgccag gagactttcc aaactcgata tccatcagtg aaagctcgta 240
 aggttgtcat ggatgcaaac acagggcggt caaaagggtta tggattttgt aggtttggcg 300
 agggagatga gaggggccga gccatgacag aaatgaatgg tgcattattg tctactagac 360
 ctatgcgaat cagtgcagcc accccaagga agtcgcagg agttcagcaa cagatttcag 420
 gaagagcagg caatggtgga tctcatgccc aaggattccc gtcagacaaat gataaacaat 480
 acaactatat ttgtgggagc gctagatcca aatgctacag atgaagatct gagacaagtc 540
 ttgtggcagt atggtgatct tgtgtccatc aaaataacctg ttggtaaagg ttgtggattt 600
 gtccagtttg cgaacagggc ttgtgctgag gaagcattgc aaaggctcca tggtagctgt 660
 attcgtcagc aaactatacg cctttcttgg ggtcgaaagg ctcgaaacaa gcagaattct 720
 cagccacagg ggcaacagcc tcatgctgat ccaaatcaat ggaatgggtc tctactggg 780
 caaggctatg aaagctatgg ttatgcccc cctcctcaag atcctgcaat gtatgcttat 840
 ggtggctacc ctggatattg gaactataat cagcaggtaa gctagagtta caagctctca 900
 aagcttggtc acactaatgt tgcaggggct gtttatttgc ccttcaagtt ggttctcatt 960
 gttttcagtc tggagggtgc aattgttttg ttttctttac caggtatagc aacgtatttg 1020
 ctagtgtgtg aagcacataa aaattatgct tcatattca ggttttcatt atctgagatc 1080
 aacatatatt ttccctagtt atattacata tttccttata attttaaaaa aaaaaaaaaa 1140

<210> 450
 <211> 390
 <212> DNA
 <213> Pinus radiata

<400> 450
 acatcatacc accgaccttg cttcaagtgc tgtcatgggt gttgtgtcat cagccctca 60
 aattatgttg ctcatgaagg caggctatat tgtaggcatc atagctctca actttttagg 120
 gagaaaggta acttcagcca gctttcaagg gcaacaccta caaaaggggt gactgagaa 180
 tcagacacag acgacaagtg atcattcggt ccagattttt gttgagagag ttgtagtgtg 240
 taattgatcc attttatata ttgatatgc aagcctgtat caagcttacc gataccgtcg 300
 acctcgagg gggggccggg acccaattcg ccctatagtg agtcgtatta cgcgcgctca 360
 ctggcgctgc ttttacaacg tcgtgactgg 390

<210> 451
 <211> 460
 <212> DNA
 <213> Pinus radiata

<400> 451
 gagtaggagg cggcgccgga ggcaaggga gcccgtagc aggcgtcagg atgagaaaa 60
 ggggaaaatg ggtttctgaa gtgaggagc cgaacaagcg gtcctgcata tggctcggtc 120
 cctattccac tcccaggacc gctgccaggg cctatgatgc tgcggttttc taactcagag 180
 gaccctccgc gactctcaat tccccaggg aagcacgtta ggagcagcag agcgacctca 240
 ggctttcgca gctcggggag ctctcacctg cctctattca cgggagagcg gccgaggtcg 300
 gcgcggccgt cgaccatgcc atgcaggcgg gcccggttcc tgcctcagacc ctgaggaaaa 360
 taaaccaaga aatgatatg aagaacgcct tgagctcaaa attgagcgag ggcaataaatt 420
 tcaagatcga agcaaaaaat aatataggc agcagggctt 460

<210> 452
 <211> 1116
 <212> DNA
 <213> Pinus radiata

<400> 452
 gtgagatttaa atgctttttt gaaatccggt tactcgcaag attatcaatc gggactgtag 60

ccgaagcttt	gagaggttga	aattcagact	tttgctccga	actgttctgc	tgaacaaaa	120
tccagtatgt	agctaggttt	agaatcgggt	ttgctgggtca	tctgggagag	gcgatccatt	180
cagcttcgca	ggcccccgaa	gatggcgttc	gccggcaca	cccagaagt	caaggcatgt	240
gaaaagacgg	tctatttggt	tgatcaattg	acagctgata	attctgtttt	tcacaaatcc	300
tgttcccggt	gccatcactg	caatggaaact	ttaaagctta	gcaactatcc	gtcgtttgag	360
ggagttctat	attgcaaac	tcattttgac	cagctgttta	agagaacagg	aagtttggat	420
aaaagttttg	aagccattcc	tagagcatca	agaaatgaca	agatgcatga	gaatgagaac	480
aggacacatc	gtaggggtatc	agcattgtttt	tcgggtacac	aggataaatg	tggtgcatgt	540
gggaagacag	tgtaccctat	tgagaaggtt	gctgttgatg	gtacatcata	ccaccgacca	600
tgctctcaat	gctgtcatgg	tggtttgtgtc	atcagccctc	caaattatgt	tgctcatgaa	660
ggcaggcttat	attgtaggca	tcatagctct	caacttttta	gggagaaagg	taacttcaag	720
cagctttcaa	aggcaacacc	tacaaaagg	gtgactgaga	actcagacac	agacgacaag	780
tgatctatcg	ggccagattt	ttgttgagag	agttgtagt	tgtaattgat	tcatttcata	840
catcttgatg	ccaagctgtt	acaatagcct	gtgactgata	agggcattct	tttgtctccc	900
tgtgtctatt	tgggtttccg	gtgtgttcat	tttcaactat	tttgtgtgtt	tagctggaag	960
aatttgagag	ggtagaattg	tgtcatcgct	atggctgtg	ctgactcatc	gagccagcag	1020
ttgagacttt	tatttatatg	ttatagtact	atatctagtc	gagttctcaa	taaaagatag	1080
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<210> 453

<211> 439

<212> DNA

<213> Pinus radiata

<400> 453

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gtgactcccc	cgcaacatgg	ttaagccctt	gccaaaaacag	agcagcccca	gcggatcgga	120
aaactgccaa	ataaagctcg	ggcagttcaa	aggaatccga	ctgagaaaaat	gggggaaatg	180
ggtgtcggaa	attagaatgc	cgaattccag	ggccaaaatc	tggtctgggtc	ctcagcaatc	240
cccggaaaaa	gctgccccgc	cctacgactt	tgctgttgac	tgctaaagag	ggcgaaggcc	300
cacattcaat	tttcccgact	ccccgccgga	aattccatgc	gcctctgacc	tgctgcgcgc	360
gcaaatccaa	gcgcgcgcgc	ccaggttcgc	tacagaagat	ttccggctgc	cgtcggaaga	420
ggacgcggcg	tctctctct					439

<210> 454

<211> 481

<212> DNA

<213> Pinus radiata

<400> 454

gcaatttcta	gtctcatttc	agtgattcac	tcaactgaaat	tattgttaga	atcactgttt	60
tggtcccca	gcttctgcgt	cgccaaatat	ggagatacgc	ctccagcagg	aaaacgacca	120
ggacatgtct	cgcccaacag	aagatcgctg	gtcccgccaa	tttaaggag	tccgaccgcg	180
taaatggggg	atatgggtat	cggaaatccg	gatgccgaga	tctcgacaga	aaatatggct	240
gggctcgta	aaaaagccgc	agcagggcgc	ccgcgcctac	gacgcgcgag	tgattgtgtc	300
gagaggggtc	aacgccaagt	tcaatttccc	caattctgtg	ccgcacattc	cgtctgcgtc	360
ttctcttttc	cgccagcaga	ttcaactcgc	tgccgcgcaa	tatgcgttgg	atcagtcctc	420
ttcaagccgc	ccgtctctga	acaataataa	agaggaaacc	gcgtcacctg	cgcagtcgtc	480
t						481

<210> 455

<211> 382

<212> DNA

<213> Pinus radiata

<400> 455

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tctcatcgac	caacaatgat	tcagcagaca	acctcaccac	cagtttagtcc	cgccgcactt	120
gctcttccca	ctctcgcctc	atccacatct	gcaaaagtctg	cagctgtgtcc	agtagcagcc	180
caagcccaac	ctcgcaaacg	tctctgctcg	gatctctccg	cagagggaga	gcgagaggtc	240
cgtgctcatc	ggaacagaat	ccagctcag	aactctcgtg	acaaacgcaa	gagcaggttc	300

actagtctcg aacaacgagt catcgacctc gagaacgaga accgccaatt acgagacgct 360
ctcgccactt cgcagccgaa cc 382

<210> 456
<211> 201
<212> DNA
<213> Pinus radiata

<400> 456
aactctcgac tatttttgaa gctgtatatg tacataaagg gatcgtaaat gcagcgaaag 60
tgcttaactc gaccctctcg gcaatcagtc agtctattca gaaactcgcg gttatatctc 120
ctgacccatt gtttattcgc aaaggccagg gtgtcactcc taccgcattt gcgatgcatc 180
tatcatgagta tatcagtcag g 201

<210> 457
<211> 435
<212> DNA
<213> Pinus radiata

<400> 457
gctctgggga cttgggtgtt tctcccaatc ctaaaactaa atgttattat ctgaaatagg 60
gaaacaagat tacagcagca gcgaaggaca aatgaaaggg ccgaggggga ttagcaatgc 120
tcaaaaactc tgtaccacact tcgcaatgcc aacatcagag aacttgatcc ccattcgctc 180
tgatattgaa attgatggac tacgtttgaa ggatgcattt acgtggaatg taaatgatcc 240
agattcagag attcatttat ttgcaaggag aaccatcaaa gatttgaat atccgggaag 300
tttcataaca ccagtagtac aatctattca agcacagtta gcagagtttc ggtcatttga 360
agggcaggaa atgaacacag gacaaaaagt gctccccctt aagcttccctt aaaatttagt 420
atatatatcc tctct 435

<210> 458
<211> 654
<212> DNA
<213> Pinus radiata

<400> 458
aaagctagat aacgtttctg tttaaataca gcgcggccga ggcggccggt cagtcacagg 60
ggtttctagt gccgtctgtc atattttcta ctctctcttc cactctgcaa aatcagaact 120
tcatccattc cccacggcat tagattcaat ccattctatt aggcctcttt aagcgagggtc 180
gcgggttcga acccgatcga atgatgcaaa ttggataacc ttgggtgtag aattctgata 240
gatttctgtc gatgggggtg tcacagaacg gcagcagcaa tgcaccgccc cctttcttaa 300
cgaagacgta tgatatgggt gacgaaccgg ccacgaatgc tatggtgtca tggagccccg 360
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actttaagca cagcaacttc tccagcttgc tcaggcgagct gaatacatat ggttttcaca 480
aaattgatcc ggaagcgttg gaatttgcaa atgagggtt tctgcgaggt cataggcatt 540
tggtgaaaaa cattcacagg cgaagcctg ttcatagcca cagtcagcag aaagcagaga 600
gtttgtctg aggatcatgt gtggaatatc aacaacttga agatgagact gaga 654

<210> 459
<211> 675
<212> DNA
<213> Pinus radiata

<400> 459
aattgaatgc gccatggttt tgtatgaatt gttacatgta cagcagattc agcaaatata 60
gcagcagcag tttcaattgt aacaacaaca aatagcagca gcggtctcaa tccaccatat 120
gggtcgaaac cctctgggtc ccagagatca gcccatgaaa ctctcagcca cagcgtctatc 180
aaagccggct aagcctttaca gaggcgtgag gcagcgccca tggggtaaat ggggttcaga 240
gatcaggtta ccgaaaca gaaccaggtt atggctgggg acttttgata ctgcagagga 300
agcggccatg gcttatgaca aggctgctta caggctgagg ggtgactatg ccaggctcaa 360
ttttctcac cttaaacacc atttggagc aaattctctc gccccctgga ctggtaattc 420
tgtgctgcca tctgtctggt atgccaaagt acaagcaatt tgcacaaagt tgaacaacac 480

tttggaaagc	atgtcttaaga	cgaagaatc	agaagaaatt	tcatgtgcat	atgagaattc	540
gggtctcttt	gggtcggtgc	gggatgaaga	tgcaagaag	aatgatgttg	tctctgtcaa	600
gtccgagact	tgtgattctg	atagtagtga	tgattccacc	attacagcgt	tgaattcatc	660
tggggatcag	aatcc					675

<210> 460

<211> 1014

<212> DNA

<213> Pinus radiata

<400> 460

cccgataga	agcccccggt	cggagaacga	atccggcgge	gggtcacatgg	gcggcagcgc	60
atttctctgt	gaaagagcag	gatcggttcc	tgcccatagc	caacgtgggg	cgcataatga	120
agaaggccct	gcccgccaat	ggcaagggtt	cgaaggatgc	caaagaaact	gtgcaggagt	180
gcgtctctga	gtttatcagt	ttcatcacgc	gcgagggctc	cgacaagtgc	caacgggaaa	240
agagaaagac	gatcaacggc	gacgatctgc	tggtggcgat	gacaacccctg	gggtttgagg	300
actatgttga	gccctcaag	atctatctcc	acaagtacag	agaaatggag	ggcgagaagg	360
tctctatggc	caaacaagga	gacccgactc	cttccaagga	aggttaacaac	gccattaatg	420
gctcctcaat	tgaaaacccct	aatgctaagt	ctacagtggt	tttgaacccc	ggcggttata	480
atagggtaca	gtcgagctgt	ctgcacata	tgacgagggc	tgctatggg	caaccggcag	540
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aagtgtctaaa	gaagtctctc	aagctcagaa	cactggaaaa	atggcggggt	tgttgttact	900
aactgtctctg	taaaaaattta	ccagaatatg	tggtcaaaat	gtctgtattt	agtaggtact	960
gaatcttagt	gaatctgctt	ctgtatatct	attttcgtct	cattttggaag	atag	1014

<210> 461

<211> 301

<212> DNA

<213> Pinus radiata

<400> 461

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agctcaaaa	atggcgcgaa	aagactcagg	aaagccctct	ccaaagggtc	aaagaaaagt	120
tgctgaaag	gaaagggtgg	tcctgataat	ggacgttgca	actatagagg	agtcaggcag	180
agaacgtggg	gaaaatgggt	tgccgaaatc	agagaaccga	atcgtggaag	tcgactgtgg	240
ttgggtacgt	tctcttcagc	ggaggaggca	gcacgtgctt	atgatcaggc	tgccagggtt	300
a						301

<210> 462

<211> 384

<212> DNA

<213> Pinus radiata

<400> 462

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tggtttcactg	ccaaaagcaa	ctatgaccac	gatcatcaag	gagatgttac	cagcacatgt	120
tcgtgttaacc	agagatgctc	aggatctctt	agttgaatgc	tgtgtgagag	tcatacaatt	180
aatctctgca	gagtcctaat	acatatgtcta	caaagaggag	aaaagaacta	ttgcaccaga	240
acatgttctg	gaatctctaa	agatctcttg	ctttgggagc	tatatatagg	aggttaaaag	300
tgcttatgag	caacacagaa	ttgagaattg	ggattgtcca	agagcaggaa	ctagatggag	360
taaaaacaga	ttggaataga	caga				384

<210> 463

<211> 484

<212> DNA

<213> Pinus radiata

<400> 463
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 tgcattggaa aagcaagtag ggacatcatc ttttgatcca aatttggtct ctacgaaaca 120
 agcaatggat agtctaatca tgcagcaact gcctaccttc ctccaatatt gcaaaagatct 180
 agaagaggcg agacagtcat ggtttatgca caagaaggaa gctacctgga ggctcagtcg 240
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 aggttcaaaa atacgtgcct tcaggggagga agaaaataca tatcttgaca aactgggaaac 360
 tgagtgcagg gagcagcttt ctagtctcca aagggatgcg gaaattgaagg aggtcaaat 420
 gatggaaatt tgggctacca aacatctgca gttgacaaaa ttcggtgaca gtgctttatc 480
 agtt 484

<210> 464
 <211> 1434
 <212> DNA
 <213> *Pinus radiata*

<400> 464
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 gtcttttgggt gtcactatct gtcctttaatc cccactttgc ctgctctggag agaagaggag 120
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 agcaatggct cgagagacca atctctttgc cctactgggc ggagatgacg accaaggcga 300
 tgatgatctc atggcactca tcaacagcgc ggccaccttc aagccagaaa agaagcccaa 360
 gactactgcc aagaaaaaac gccagcagca gccgcgcgcc cccagctctc agctcgtcaa 420
 acttctctcc aaacctcttc gcgccgcgga agcctgtagg gcggatagag gaagaggaag 480
 gggcgggcgg ggcgcgggtg gaggccggtg cagcccgctt gaggggcggtg aatacaacac 540
 cgagagcaac ggatatgggt gtggggcggtg ttttgaggc ggccgaggtc ggggtcgcca 600
 tgaggactct ggggaaccgag gttgggggtg tgaagaggac accggaggcc ggggttgggg 660
 tcgaagcaac ggcgaagagg acaccgggtg ccgaggttgg agtcgaagca accggtgagg 720
 cgacgtctgt gcagcgggag gacagagcgg ccgagagagg cgtggacggg gcaagggccc 780
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 aagaaaaaca ttggaagcct taaaaaatgc gaaaagaaag gttattctgg acagagattt 1140
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<210> 465
 <211> 364
 <212> DNA
 <213> *Pinus radiata*

<400> 465
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 cgtataatga ggttgacagat gaattagttg cagaatatgc aaatctcaac atgcgcgtca 180
 tttctctctg tcagcaacaa tatgatgaga aaaaacataag gcggagggtg tatgatgat 240
 tgaattgact gatggcaatg gacatcatat caaaggacaa gaaggaaatt cagtggaagg 300
 ggttacctag cacaagctct aatgaccttg aagacttgaa ggcaaacgcg atgggattgc 360
 gggg 364

<210> 466
 <211> 237
 <212> DNA
 <213> *Pinus radiata*

<400> 466
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 ttgcctcccc acgaaaccgg acccgctctt ggcttggcac ctctgcacaca gcagaagatg 120
 cagctctagc atatgatcac gagggttaca aattgagagg tgagaatgct cgtctcaact 180
 tccctcatct gtttttaaac aagggatcta ccagccctaa agcttggtca gttgcgg 237

<210> 467
 <211> 578
 <212> DNA
 <213> Pinus radiata

<400> 467
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 acagtgcacac taatgcacac aaaaaaactt ctagaagtgt gagttaatcc ctctgatatt 180
 ggcatcatta caccttatgc agcacagggt gggctgttaa agataatgag aagcaaaagag 240
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 cctacaataa cccatgatac actgagacta cttttttt 578

<210> 468
 <211> 432
 <212> DNA
 <213> Pinus radiata

<400> 468
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 cgagctcgtg ccgaattcgg cagcagctgg gatcacgtag aagtgcgaag agatgtgaag 240
 agaagtggga aaacatcaac aagtatttca ggaaggccaa agagagtaac aagaaacgtc 300
 ctgagaatgc caagacctgc ccttactttc accagttgga tgctttgtac aagaagagaa 360
 atctgggcaa caggcacaac aaaattatgg tcctgagtat ttctctctgt gcttccactg 420
 ggctgttcat gc 432

<210> 469
 <211> 657
 <212> DNA
 <213> Pinus radiata

<400> 469
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 ttgctcagga aacctagacc cttcggttcg tgaagctttt cttttcgtag gaaacccctt 120
 ggcaaccggt ggcgatggct ccagcaaca acagaagaga cgacaatgga gcacgaggag 180
 ttcaactcag gggcgctcagg aagaggccct ggggtcgata gcgcggcggag attagggatc 240
 catggaaaaa agttcgctct tggtcggcga cttttgacac ggcggaggaa gccgccggg 300
 cttatgacac tgccgctatc tctctgcaca ataatcagag cagtgcgcaa aacagcagca 360
 cctcgccgct ctcgccctct cgccgccctg tgactcgatc cgagagacct gagcttcccg 420
 cgttgagatc cttgcccctg ggagtttcca ccggcgccg ggttttaaat ggtggaacac 480
 cctcttttct cctcgccctc ggagtttcca ccggcgccg ggttttaaat ggtggaacac 540
 cccgctccg gcgcggcggt agtctttcgg agaaaaacag cgccagaaaa gctgaaggcg 600
 ccgagcgcg aaccacccta agcgattctg attcttcttc ttctcgcggt ctagacg 657

<210> 470
 <211> 581
 <212> DNA
 <213> Pinus radiata

<400> 470
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 cagcagcaga tggcagatgc tgetgctgca atctatgcct catctgtaaa gaggcagggt 120
 aatggggacaa tgatggggga gggtaaatgga acaatgatgg ggcagggttaa cggggcaatg 180
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 atctcccgc aaccagcttt cttctgatgg tatgggcaac agccatggag acaactcaac 420
 agtatcgcca attctctatg aagtgtgaag ggcaggaaaa gagggtgacc 480
 ggtggagaaa gtatgtgaaa gaaggcagag acgtatgata aagaatagag aatcggcagc 540
 aaggtcgca gctagaaaaac aggcataatc cgtgaattgg a 581

<210> 471
 <211> 451
 <212> DNA
 <213> Pinus radiata

<400> 471
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 gacaactaaa tgcctcagagg agctgcagaa taagatcacc aatatattg ctttgaaaa 120
 tcttggaaga agcttcaaca aagaactacg caattcaaa ggtatctgta atccagattt 180
 cttgcagcgt gctgtgaagt accaggggat agatcaaat ggtagctgct tcaaaaagga 240
 aatatttgat ccacatggat atgatccgag tgactattac gatgctttag ctttggagct 300
 caagagagaa ttgaaagaa gagaacaaga gaagcaaaag aatcaaaagg tagattttgt 360
 tcatggagct gtacaaaact catcggatca aagccaattg tgcaggctcat 420
 ggttggtcaa aaggtgcctg ttgttgggg a 451

<210> 472
 <211> 1286
 <212> DNA
 <213> Pinus radiata

<400> 472
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 gctggacacc tcgaatctcc tccggtcatt ttttgtttg acagggccgg ttgtgtgatt 180
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 ggagggacag acttaatatg agattcatgg agctaagctc tgtgttagaa cgggttaggc 540
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 tacgaactga ggcgcagaac ctgaaagctg agaatgaac actgcaggaa gccatataag 660
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 aaaaatttga ccaacaagta aaagcaatgg ctttgcctac aggcctttgt cgcacatcgt 780
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 caatgtttag tgctaggtgc cattgcatca gtccaatatt ctaatttttt ttatattgtg 1080
 aactagagat aattgaggat aattacaatt catcctgatg atgaaatgga ttaactgctg 1140
 tattatgaaa aattacactg gagctttgca gaacaattat taatccttg ttcattggtc 1200
 tgacatgtct tgaactggag atcgtcgaa cacttacagt tggataaac attctgacat 1260
 ttctgttcaa aaaaaaaaaa aaaaaa 1286

<210> 473
 <211> 1358
 <212> DNA
 <213> Pinus radiata

<400> 473

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caaattttca	aatgctattt	atatatgaaa	tgacggtgga	gcgagagcca	cggggaagtag	120
cggttggaag	gcaggggatg	aggtcttttg	ggctgtgtct	gtcgcttcca	gacgacttct	180
cattggagcg	aaacgcctct	cggcatttgg	gtcagtgaac	caacgaacgc	tggcttcaag	240
gttttcgttt	tatctttctt	atcttcactc	cttggaattt	gtttcctttc	gatcctgaag	300
ccgattcatt	gtgtgagttt	tccgcgaatt	aactgatcag	gggttcgggc	tctgtatcaa	360
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ggagccttac	aattccacga	actctcagcc	gcaagactgt	ggagcagggt	tggagagata	1260
ttcagcagag	ccagggaagc	agtaacgaag	agaagaagcc	gcagcagagg	caatccacct	1320
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<210> 474

<211> 517

<212> DNA

<213> *Pinus radiata*

<400> 474

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agaatcccc	acaaggcgta	tgtaatgatg	ctataaaaa	tgaactggag	gaggaaattc	180
agaggctcaa	gagggataag	ggctctgcta	tgtatggagc	tgttagaatt	agggacgaac	240
atcaaggtac	cgagatgcac	atgcagacct	tggaggagcg	tttgcaagcc	atggaaaccc	300
gcccaacagca	aatgatggca	tttctggcca	aagctgtaca	gaagcctgga	tttctggcac	360
agcttgtgca	acagagtgaa	aacaataagc	ttcttgaagc	agctaataag	aagagaagat	420
tacccaagca	agagaactgt	tcagaggctg	gggaaactga	gttgacagac	agtcagattg	480
tgaagtatca	acctgtctca	ggtgatgaat	gtagtgc			517

<210> 475

<211> 337

<212> DNA

<213> *Pinus radiata*

<400> 475

gttgcctgct	cttctgcttc	tgcttctggt	actgctgttg	ctgcgtcttt	gccagtgaac	60
gggtgcctgc	gggtcagatc	tagtgttgat	tccggagcatt	cggatataga	ggcgtctttt	120
aaagaggcgc	aatgcagctc	ggccattggt	gaaaggaggg	ctcggaaacg	gggcaggagc	180
cctgcacatg	gtagagaaga	acctctgaat	catgtagaag	ctgaaaggca	gaggcgagag	240
aagttgaacc	agaggtttta	cgcactccgc	gctgtggttc	ccaatgtgtc	caagatggat	300
aaggcctctc	tgttgggtga	tggcatttct	tacatta			337

<210> 476

<211> 362

<212> DNA

<213> *Pinus radiata*

<400> 476

caatatcata	tcccaactca	cgaaatagac	aatctctttt	tatgatggtc	aatgataaag	60
------------	------------	------------	------------	------------	------------	----

aaaagtaagt	gtagattctc	gtaaccaata	acctttta	agctgccaat	gagtcacaaat	120
tcattctgtc	gatgcaatat	tgactgtatg	cagaagaatc	gagcactgtc	acgcatctcc	180
aataccagca	aagtattctt	gagaatgact	tgaggtcgaa	actgaaggat	aatctccaac	240
agccacagaa	ttctgggaag	aagagacgct	atagaggcgt	aaggcaaaag	ccgtggggca	300
aatggggcgc	tgagattcga	gatccaaaaa	aagcagctcg	agtatggctg	ggcacccttg	360
ac						362

<210> 477

<211> 612

<212> DNA

<213> Pinus radiata

<400> 477

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ctctctacga	agatggaatt	ggctctagaat	ggctgtcgga	ctctgtggag	gattcctttg	120
cagctacagg	aagtctgaat	tctggttcct	tgctgacttt	gtctaaaggac	aaaactcgacg	180
acaacaggga	gaagaagaag	cagaacccaa	ccgtggaagc	gataatccct	gaaataccgc	240
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gcagaagctc	aggagcccca	attcgcggtt	ggctactctc	tgaagattac	gcattgcaga	360
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gattggggcc	gttgggtccc	aagaccctgt	gcaatgcctg	cggtgtgagg	ttcaagtctg	540
gcaggctctt	ccccgaatac	aggcctgcca	agagccccac	tttctattcga	tacattcatt	600
caaattccca	ta					612

<210> 478

<211> 680

<212> DNA

<213> Pinus radiata

<400> 478

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gacaaacgct	gaatcactac	aaagactcat	cgttcaaaag	aaatgtctcc	tttttggcaa	120
aaaggttagga	ataagaattg	acggaaagaa	gacgcgcaat	acagaaaaag	tgaatgaacg	180
gaacacaaat	ccaaggatca	tttttggggc	attaacattt	acaagaaacc	gcctcatgct	240
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caaggggatg	gcattctctg	gccaggcaaa	ataagcattt	ttatctggat	cagaaaaggt	600
taattgtcca	gaaatcagat	gttagagtg	agaagagaaa	ttacctactc	ctaagggaatg	660
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<210> 479

<211> 544

<212> DNA

<213> Pinus radiata

<400> 479

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tgtgagcttt	attctctgtg	aacattctgg	gcaatgtctac	tgagtcctac	accgcggaat	180
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cccctacctc	cggtcagggc	tgtgagagag	tcagagaaat	gagtgggcag	aggaggtcga	480
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cttc						544

<210> 480
 <211> 971
 <212> DNA
 <213> *Pinus radiata*

<400> 480
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<210> 481
 <211> 710
 <212> DNA
 <213> *Pinus radiata*

<400> 481
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 agccacagaa tccacaaaaa aagaaacgtt atagaggggt aaggcaaaag ccgtggggaa 660
 aatgggcccg agagattcgt gatcctaaga aggcagctcg agtatgggtg 710

<210> 482
 <211> 1240
 <212> DNA
 <213> *Pinus radiata*

<400> 482
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gttcgcagat	atcttttcgc	gtcagccaag	gagggcattg	cttaccactg	gctggagtg	840
ctttgttagt	tctaaaagac	ttgtggcagg	agatgcattt	atctttttga	gggtgaaaa	900
tgttataatcc	cgtgtgggag	ttaggcgtgc	catgcgccag	caaaaacaatg	ttccatcatc	960
agtcacacga	tgcattctgg	tgtcattgca	actgcataac	atgcagttac		1020
aacgaagacc	atgttttagt	tctattataa	accaaggaca	agcccatcag	agttcataat	1080
ctcttatgat	caatatatgg	agtcattgaa	aatacaattt	tcggttgaaa	tgagattcaa	1140
gatgaagttt	gagggggaag	aagtcaccga	gcaaaagatt	actggaacca	ttgttggaat	1200
aagtgatgct	gattcctgtg	actggccgaa	tccaagtgg			1240

<210> 483

<211> 516

<212> DNA

<213> *Pinus radiata*

<400> 483

ttcagatcta	taaatcaatg	tctgcattaa	tgacaaacta	agttgaaatt	cccaaatggt	60
ggtgtgtact	atttaggatc	ggacattagg	cgttgtgtgc	tcgggttcga	ttcaacaaggc	120
atttctgttt	cggaaattca	aagcaaacacg	tatcagaaaa	ctgattctat	actgtgatga	180
cgcagggtac	taactacaca	gcagggtaca	tcagagacga	tcaagaggag	caatgtgtga	240
ggaggggacc	ttggactgtt	gatgaggaca	tgagccttat	tcgatgcgta	accaccgggg	300
gtgaaggtcg	atggaaacaca	gtagccaaat	ttgcagggtc	aaagagaaca	ggaaagagct	360
gcagattgag	atggcttaat	tatcttcggc	cagatgttaa	acgtggaaac	ataaccggcg	420
aagagcagct	attaatcctt	gaactccacc	gtctctgggg	taacagatgg	tccaagattg	480
cacggcaact	ccagggcagg	actgacaaag	aaatca			516

<210> 484

<211> 328

<212> DNA

<213> *Pinus radiata*

<400> 484

ggggaatgat	tctgggcgca	ggccattcga	gcgccatata	cattgcggcg	gactgcggga	60
agtattgttt	tcagtaattc	ccttaattgg	gtcccagaat	acgttctcag	atccgaaaaac	120
ggttcagctc	atcggagggt	acagcgattc	gaaggcctga	aaaccctaaa	aatacctatc	180
cccctttgtc	tttgaattgc	ggagaactat	ggcagcccg	atagcagcgc	ccggtcggag	240
aacgaatccg	gcggcggtca	catgggcggc	agcgatttct	ctgtgaaga	gcaggatcgg	300
ttctgccta	tagccaacgt	ggggcgca				328

<210> 485

<211> 919

<212> DNA

<213> *Pinus radiata*

<400> 485

gtcatccata	ttttcttttt	cagtcctgca	tacaaaattgt	tattcgagat	acgattgac	60
agcttgaa	gctatgctta	tgcttgccga	aacataccgt	gacagctttg	agaagacttc	120
gggaggtgac	agcgtggatc	tggttaggaat	ggctctacca	ggtttgcccc	ctaatttctc	180
ttctgcttca	gtttcagctt	cagcgtcggg	agattctgcc	aagaaaaata	ggaaacctta	240
taccatcacc	aagtccagag	agagctggct	tgagcaagag	cacgataaaa	ttctcgaagc	300
ccttcaacta	tttgatcgtg	attggaaaaa	gattgaagct	tttgtaggat	caagagctgt	360
catcacagat	cggagtcgat	cacaaaaagta	cttcttgaa	gtccaaaaag	atggcacaag	420
agaaacatga	ccacctctct	gtccaaaaag	caaagcatct	catccatacc	cacagaaggc	480
ctcaaaaaat	gttctcgtgt	ctacagcaag	atcaactgct	tttccaaactg	ctgctactca	540
actagattct	ggatattatc	caagggcaga	gtgctcttcc	atactcacca	aatctggctc	600
gtgcgcacca	actgtttctt	cctgggttca	tcataccata	ccatcaatag	atgcttcggt	660
tgtggaaaaa	gatgatgggt	ggcctccagg	cattgaaaca	gggaataatt	gcagtagtgg	720
tagcaactgag	agttctcctc	ctacgtggcc	accctgttct	gaaatccctg	agaaagtcaa	780
accagatttt	tcacaagttt	ataagttcat	tggcagtgct	tttgacccga	gcacaactga	840
tcaacttgaa	aagcttaagg	aatggatcca	attgatcttg	aaactgtgtt	gtacccatga	900
ggaaacctttc	cacaaccttg					919

<210> 486
 <211> 359
 <212> DNA
 <213> *Pinus radiata*

<400> 486
 tctgtaagtg cttgagggct tcttgatcgc atgaggccat taacgatggg aagatctttt 60
 agtgtgttgg gctgttcaaa agataatggc cagcagcgtc ttaatcgtgg atcttgaggt 120
 gctgagggagg atacaatttt gagtgaacat atcaaaaactc atggaggtgg tcgatggaga 180
 tctcttccca agaaagcagg tctaaaacga tctgggaaga gttgcagatt acgttggttt 240
 aactatcttc gtccagatgc caagcatgga aacatttctc gggaagaaga ggaactcctc 300
 atcagattac atcgtctcct tggcaatcgt tggctgttga tagcaggacg acttccagg 359

<210> 487
 <211> 438
 <212> DNA
 <213> *Pinus radiata*

<400> 487
 gtagggtttt aaggaaagaa gacgatccaa gcagtggtt tttatcgagc tcccacgcag 60
 tttgaagggg gtccgagcag aagaagatcg gattcgttca tccctcatcac aaagaatata 120
 ccatgggggt cattaccctat gtaaaagaaa agtaagagat ggatcgggat aagctttatga 180
 agatgggtgc tgacgttcgt actggttgaa agggatcacg acgcagaaag aagaagcag 240
 ttcacagagc cacaacaaca gatgacaaaa ggtctcaaaag taccctgaag aggttaggag 300
 tgaatactat tctctgtatt gaagaagtaa atattttcaa ggaatgagat gtcattcatt 360
 ttataaacc aaaggttcaa gcctctatta atgccaatc atgggtgggc agtggatctc 420
 cccagacaaa aaattttac 438

<210> 488
 <211> 478
 <212> DNA
 <213> *Pinus radiata*

<400> 488
 agaatttagg tagggtttta aggaagaaag acgatccaag cagtggtgtt tttatcgagc 60
 cccacgcagt ttgaaggggt tcgcagcaga agaagatcgg attcgtttcat cctcatcaca 120
 aaagatggat cgggataagc ttatgaagat ggctgtgtgca gttcgtactg gtggaaaagg 180
 tacagtagcc agaaagaaga aagcagttca cagagccaca acaacagatg accaaaaggc 240
 ccaaagtacc ttgaagaggt tagggagtga taccatttct gctatttgaag aagtaaata 300
 tttcaagatc gagatgggtc ttcattttat aaacccaaaa gtccaagcct ctattatagc 360
 caatacatgg gtggtcagtg gatctcccca gacaaaaaat ttacaagatc tcttcccagg 420
 aatcatcaat cagcttggac ctgataattt gattaatttg aagaagattg cccaacag 478

<210> 489
 <211> 608
 <212> DNA
 <213> *Pinus radiata*

<400> 489
 tgacgacgaa gaagaagctt ctctgaaggg caaggtgcgg tggggactag attcgatagc 60
 ggctctgggt ttaagtgtct gaattaaacg ggctttggct aaaaagtaaa aaacgggtgg 120
 aatttgagca ggaggagctg atagagtggtt attatcgga cggatgaaat aattgaagcc 180
 aaagggtcct atgtgtgtgt ttgtcggaact aggggaaatg aatttatagg 240
 agtgaagtag gtgttctgtg agaataatgc gggcagctca taataacagc aataaatgtg 300
 agaaatcttg cgtgttgaga ctctctgag ctctcgtttt cagaatgagg accggcttct 360
 cccagcagca tcgggaaggg gaaaagagga gtctcaattc agagctatgg catcgatgtg 420
 ctggggccact tgtgtcccta cctgtgtgtg ggagccgtgt tgtatatatt cctcaaggtc 480
 acagtgagca ggtgggtgac tcaacaacaa agaggttgat gctcacatcc ctaactatcc 540
 aaatcttcca ccacaattaa tctgccacta cacaatgtta ctctcgaggc agatgtggag 600
 acagatga 608

<210> 490
 <211> 331
 <212> DNA
 <213> Pinus radiata

<400> 490
 ttgaattctt gtcttcccc cagctgagc tctctgagc caaggtgaga ttcagccagt 60
 agtaagctat agattgtag ttcagagaaa agactgaaag gcaaaaacta tatagacata 120
 acaacggaga gagcagcaca ggaaccaggt tgcataatgg ctaggcctca aagatcacaga 180
 ggagtccgtc agaggaactg gggatcatgg gtctctgaaa tccgcatcc ctattgaaag 240
 accagaatat ggctaggaac atttgaaca gcagaggatg cagcacgagc atatgatgaa 300
 gctgcagga tgatgtgtgg gccgagagct a 331

<210> 491
 <211> 431
 <212> DNA
 <213> Pinus radiata

<400> 491
 ccgtatctt ttcattaca tcccacgta ggtcacggt tcgaaccctt gcaaggccat 60
 tcttctgtta agatggtag atctccctgc tgcgacaagg ttcatacaca taacaagg 120
 gcctggacca aagaagaaga cgagcgtctc atagcacaca tgaagccca cggcgagggc 180
 tcatggcgtt ctcttcccaa ggcgcgaggg ctgctcgat gtgggaagag ctgcaggttg 240
 cgatggataa actacctcgc tctgatctg aaacgcggaa gcttttcaga agaagaagc 300
 gatctcatca tcaaaactca ctccctctc ggcaacaagt ggtcgctat tgcagggaga 360
 ttgcaggcg aacggacaac gaaaataaaa aattactgga acacgcacat gaaaaggaaa 420
 ttgttgagca g 431

<210> 492
 <211> 469
 <212> DNA
 <213> Pinus radiata

<400> 492
 gccagagctg tggctgttcc cagaagagga tatcatcagc tgtccagtt gtccaaagag 60
 actacagaag aagaatatag aagatgggta gatcccttg ccccccacaa gaagcgctta 120
 accgtggggc ttggacaggg atggagagata cgattctcac cgagtacatt cgagttcatg 180
 gcagtggttg ctggaagaat atctccaaaa gagcaggtct taagaggtgt gcaaaagagtt 240
 gcagatttgc ttggctgaac tatcttcgtc ccgatattaa acgttgtaac atttctcccg 300
 aggaagaaga gctcattatt cgggtgcatc gcctctcttg aaatcggttg tctctgatag 360
 caggcagact gcctggtcga acagacaacg aaatcaagaa ttactggaac actcatatga 420
 gcaagaagcc atggctgtca atggacgaat ctacgtccaa tacttgcga 469

<210> 493
 <211> 380
 <212> DNA
 <213> Pinus radiata

<400> 493
 gaggaggagg acgaggagga ggctgggaag gagctggagg cgtgggagag agcatacgt 60
 gacgaagggt catgggaaac cttgcaggag gacgaggagg gtctctcaca ctttgacaag 120
 aaacagcagc aaacagcaaca gcgccaatc agacgcgctc tgcagctctg tgcagccgag 180
 ctctcaaca ttacgagagg attgatccgt tatctctaca tcatcatcga ctctctcgg 240
 gccgagcagc agaaggattt caaaccaaat cgaattggtg tgggtgcaaa ttgtgtcgag 300
 gcatttgtga gagaattctt tgatcagaat ccactaagtc agctgggtat tgtattata 360
 aaaaatggcg ttgcacatcg 380

<210> 494
 <211> 420
 <212> DNA

<213> Pinus radiata

<400> 494

gtcgcagctcc	ttgctgcgag	aaaacccata	caaacaagg	cgctcgaggt	aaagatgaag	60
atgaagcact	cgttgcatat	attcaagccc	atggagaagg	cagttggcgt	tccttcccc	120
aggccgctgg	gttgcagcgg	gttgccaaaa	gctgcagcgt	tagatggata	aattatctcc	180
gtcctgacct	caaacggggc	aatttcagcc	cagaagaaga	tgagatcatt	atcaaacctc	240
attctatgtt	gggttaacaag	tggtctttga	tcgcaagcaa	attgccaggg	cgaacagata	300
atgagataaa	gaattacttg	aacactcaca	taaagagaaa	aatggttagaa	aggggtctag	360
atcctctctac	ccatctccct	ttaatgtcag	accatggctc	ttttgagtc	tcagcaaga	420

<210> 495

<211> 568

<212> DNA

<213> Pinus radiata

<400> 495

aaaagtgtgt	ctccactgg	atttcactca	gcagccacct	gcccaggagc	tgactgccag	60
ggatcttcat	gacaatgaat	ggaaattttc	gcattttttt	cggggtcagc	ctaagaggca	120
tctgtctaca	acaggatgga	gtgtttttgt	cagtgcgaag	agacttcgag	ctgggtgattc	180
tggtctcttt	atttggaaat	agaaaaggaca	actgtgtttg	ggaattagac	gagcaaacag	240
gccacaggct	gtaatgccct	catttggtact	ctcgagtgat	agcatgcata	taggggtctct	300
tgctgcggct	gctcatgctg	ctgctacaaa	tagtcgattt	actattttct	ataatccaag	360
ggcaagtcca	cttgaatttg	tcatacctct	ggcaaatgat	gttaaacagc	ttatcatcac	420
tcgtgtttct	ataggaatgc	gttttagaat	gctattttgag	acagaagagt	cgaggtgttcg	480
cagatataat	ggcaccataa	ctggcataag	tgacttggat	caggttcgat	ggccaatttc	540
acattggcgt	ctgtctaaag	ttggttgg				568

<210> 496

<211> 396

<212> DNA

<213> Pinus radiata

<400> 496

tgggagtgtt	ctaattgatg	tttcggaaa	ggagaaaagc	agctgctctg	cgaaattcat	60
agaagaaaaa	gcgtccagca	atcttcagca	gcctctgcta	gcagatgcgt	ttcgcgggtc	120
aattctgtgg	aagagcaggc	attgtctctc	acctctctcc	ctgtttcttc	tcacgcagag	180
gcggcgtagt	ttaattgtgt	tcacaaatagc	acatccgggc	tcctggtgta	aaatgaaaaa	240
ctcagaaaaa	ataatttgct	tctcatgtca	gagctggcac	aaatgaagaa	acagtgcaac	300
gatctctctc	tggttctgtc	aaagtgtgta	aacattacc	cggaacaact	cagcaatatc	360
ctgatagccg	ctctccaaac	gaattgccgc	gatgaa			396

<210> 497

<211> 643

<212> DNA

<213> Pinus radiata

<400> 497

cggaagtggt	ggagtgcggg	acaatttgta	tggagctcag	gaagacagtg	gtggaagtga	60
tgttaaacag	aagaacttga	aggatgggga	ccaattccac	agttagtgat	aagctgcag	120
tgaggtcaat	gaattcaaca	ttatgaaaag	aagcaattca	ggggttggat	atgaagataa	180
caaaagaagt	ggggggcaag	gtgatggcaa	tcagtcacag	tcacgtccact	ctcggagcat	240
ctccatggat	agcatttatg	gtaagatgca	taacttcagt	gaagacttgg	aacaggaacc	300
gtctcaaggt	cggaatgtca	gcactccca	tagcaattcg	atggatggaa	gtacaaaatt	360
caatgtggaa	ttcgggaatg	gggaatttcag	tgcatctgag	atgaagaaga	tcatggccag	420
tgagaaactg	gcagagcttg	caacggtgga	tcacaaacgt	gtcaaaagga	tattggctaa	480
tcgccagtcg	gctgcacgct	caaaggaaag	aaagatgcgc	tatatctcag	agctggaaag	540
caaagtcag	accttgcaaa	ctgaggcaac	aactttgtcc	gcacagctga	ctcttttgca	600
gagggatcaa	ctggactggg	cagtcagaac	cacgagctga	agt		643

<210> 498

<211> 328
 <212> DNA
 <213> Pinus radiata

<400> 498
 aaaatctgta cctagagccc agcaatatcc ttgcgaatgg ctgacggcca ccagttcaac 60
 aatatatttgc ttgttaggtcg aggcggcagc aatccgggtc aactgaggat acattctgga 120
 ggtatagttgt ggagaaggca gggtaggggc aaggtgggtg atgtggcgaa aaacgaagtc 180
 aagagtttga gttggactcg agttcccagg ggttatcaac tcggtgtcaa gcttaaaagtc 240
 ggggtgaaac tcaagcttgc gggatttcgt gaacaggatg tcggcaattt gacaaatttc 300
 atgacaaaca caataggatt agctccca

<210> 499
 <211> 372
 <212> DNA
 <213> Pinus radiata

<400> 499
 ggtgtatttgc attgcaagtg aggaatttta ggaggtgtgg cgtaaaaatgg gagaccacag 60
 tgggtggagag agcagtcctc attctgacat agagtctacc ggcattccaca ataattggatc 120
 ttcttctctcc tcacaatcca tcatacggaga gcaagaccgg ctgcttccca tagcgaatgt 180
 ggggcgcatc atgaagaaaa ccttcccaac caacgcccaag atcttccaag aagccaagga 240
 aatcatgcaa gaatgcgtct ccgagttcat tagctttgtt actggagaag catccgacaa 300
 gtgtcacaag gaaaagcgca agaccatcaa cggcgatgac atactatggg ccatgaccac 360
 tctcggtatc ga

<210> 500
 <211> 344
 <212> DNA
 <213> Pinus radiata

<400> 500
 ccgcaacatt caacgtaatg aatatcataa tcttttcaac ttcacagtt ccaagggatt 60
 gaaaataatg aacttaggag atgcacatgg caccagtgga gttgctgccg ttctcgagaa 120
 ttccgatgat gaagctgtgg atccacatct tgaacgtatc aaaagtgcac gtgaaggcgg 180
 tgctggagaa gatagtgat aagagggcatg ctacactggg gacttatctc tgatattgtc 240
 tgtagtcaaa gaactaatat gcacacatga ttaacaagag ttaaatcaag agactgatgt 300
 ctgtttctgt tttgtttgtg tgcaggatga ggattttgtt gcag

<210> 501
 <211> 462
 <212> DNA
 <213> Pinus radiata

<400> 501
 gggaggcaga gaagggaacgg aaaaaggagt gaatttttgc ggggtttgtg ttattgggaa 60
 gatggggtgt gtgtcgtcca aggtggagaa tgaagaatta gtgaaaagat gcaggggacag 120
 gaggaggcta atgaagcagg cagtgaattc caggccaat tttgctgcag cccacattgc 180
 ttatttgagg gctctgcaaa acacagggaa tgctctggta caatttgcgg aggggggaatc 240
 cagtgctaatg aatggcaatg ctattgaaga agcggccaca ccaatgccag cgaccccatc 300
 aaacagcatc catcgccatc ccatgaaatt ccatctctct cctccgctc cgcccgccgc 360
 attggtgcct agcagccctc ccgtgagtc cagcatggag agctttcgta tgccatccaa 420
 acacaatccc ctcatgaggt ctacttcaga cattagctat gt

<210> 502
 <211> 504
 <212> DNA
 <213> Pinus radiata

<400> 502
 tatgtctctg catttcagcc agtccatggt ttcaagttag ttatgccaat aaagcagaga 60

tgggtcgtgc	tccatgctgc	acaaaagtgtg	gtctcaacaa	gggagcatgg	tctgcgaag	120
aggatagctc	tctgggaaga	tatatccaaa	ctcatgggtga	aggcaattgg	aggctctctgc	180
ccaagaaagc	agggctgcga	agatgtggaa	agagctgcag	atttgcgttgg	ctaaactatc	240
ttcgcccatg	tatcaagcgg	ggaatatatta	caacagatga	agaagaacct	attatcagaa	300
tgcatgctct	cttgggcac	cgatggctcga	taatagcagg	gagagctccc	ggccgaacag	360
acacgcaaat	aaagaactac	tgggaacacta	acttgagcaa	gaaacttgct	gtcaggggaa	420
tcgatcccaa	gactcataaa	aaaatcacga	cggacggcac	gaacagagtc	aacgctgatc	480
gtttcagcca	gaggaaaggt	gaga				504

<210> 503

<211> 416

<212> DNA

<213> *Pinus radiata*

<400> 503

acggcaactc	attcgtgaac	tagaacagat	gtttaacatt	gaaggagaac	ttgaggatcc	60
aagcaaaagg	tggcaggttg	tatacactga	caatgaagg	gatattgatgc	ttgttggaga	120
tgatccatgg	caagagttct	gtagcattgt	cgcgaaaatt	tacatttata	cgcgtgaaga	180
ggttgaaaaa	atgacccac	aaaccccaag	tgcgaactca	agggatgttc	agaagagctc	240
gtcacaaag	gaaacttccc	ggagttctga	tctgcaagat	tcatcaattc	cgggggtcac	300
cgtcgaagg	agttctgatg	cctgatacca	tttcaatctg	catgttggtc	actctgtgtg	360
ggcgtgctaa	aggggcatca	aggggcatgt	tttagttggc	cgtttgatgc	cttggg	416

<210> 504

<211> 1206

<212> DNA

<213> *Pinus radiata*

<400> 504

gccgaaaactc	gaatcgatag	gttttgtggc	cggttcaaat	attttagctg	gcttagcttc	60
tcttggttcag	aaatggcggga	ctaaaagtaat	agtggtcccc	gaggtctggt	gttcgaattc	120
ctgtgggctg	aaaggtccaa	ttttctctc	gagtttcat	gattctgaaa	aactgggaat	180
gctatggcga	tgaacatgg	gagattgtgt	gaagatttgg	ataggattaa	ggggcggtg	240
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aatcagctga	gccctcaggt	ggagcacaga	ctttttacc	cgtccgagga	tgtctgtatt	420
ctgcaggccc	acgcgcagca	cggcaacaaa	tgggcaacaa	tgcccagagc	ctccccggc	480
cgcacccgaca	acgcgatcaa	gaaccactgg	aactccacgc	taaggaggcg	ctgcccggga	540
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ggccccggag	ttgaagccga	ggtcagaggt	tccgaacggga	gcgacgcgaa	ccccgggacgc	780
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cacaacaata	gcacagttaa	taacaatatt	ctatttccgc	cgggtgtgaa	tacatgagag	1020
cagacgaggc	ggtggtggag	cgatcagca	ccgcgcgtcaa	ggccacggtg	gcacagatgc	1080
taacgcctgt	tctgaactcg	tcgccacgtg	gctacacccc	accgctgtgtg	agcagcgacc	1140
ttctcggcgt	gatcggggat	atggttgcga	aagaagtga	gaaatatatg	tccagtcact	1200
accagc						1206

<210> 505

<211> 386

<212> DNA

<213> *Pinus radiata*

<400> 505

gagaatttgg	tcgttcactc	gaaaaaggac	gaggatatgg	aaggggcccgt	ggccgtggtg	60
gtcgtggag	atatggtaat	gatgctgggt	atgaaaagta	gagggctcgg	agggcagtatg	120
aacgtcggag	tggtaactgga	cgaggctacg	aggttaagag	agaaggggct	ggtcaaggaa	180
atgtgggtac	tctacagat	cagggatcca	cagaggaaac	tgaagagctg	agtcgtgcag	240

aggaagagaa	gactgtgacc	cctgagaaac	aggaagaaca	gaaacccagt	gaagagtcca	300
atcaagaaat	cctcgaccca	gagtcctgaag	agaagaaga	ggaggaagaa	gacaaggata	360
tgactcttga	tgagtatgag	aaagtg				386

<210> 506
 <211> 408
 <212> DNA
 <213> *Pinus radiata*

<400> 506						
ggcagtgaa	agcagtcctc	ctgttggaat	gaggttcaag	atgcgttttg	aaggagaga	60
gtctctcgaa	cggaggttta	ctggtacaat	tattggcatg	ggtgaggttg	ataatgtgag	120
atggccagaa	tcaaatgtga	gatcacttaa	ggctccagtgg	gatgaaacat	cagtgggtccc	180
gcgaccagag	aggggtttcac	catgggaaat	tgagacgttt	gtagcttcat	ctgcagcact	240
taattccttg	ccagcaccaa	ggactaagaa	gcctcggtccc	aatttgggtg	cctcatctca	300
ggaattaatg	atacatggat	cgggcaaaac	agcaacagat	tcttcacagg	tacacagatt	360
gccaaagggtc	ttgcaaggtc	aagaaatgag	gacctttgga	ggatcctt		408

<210> 507
 <211> 320
 <212> DNA
 <213> *Pinus radiata*

<400> 507						
gcaaaagagt	gcagattgag	ttggctgaac	tatcttcgtc	ccgatatata	acgtggttaac	60
atttctcccc	aggaagaaga	gtcattatt	cgtttgcatc	gccttcttgg	aaatcggtat	120
gtagagaatc	gggggacatg	atttattcat	gcgcagaat	ttcacgattc	ctcatcgaat	180
tagtcatgca	atgtttgtgc	aggtggtctc	tgatagcagg	acgactgcct	ggtcgaacag	240
acaacgaat	caagaattac	tggaaacatc	atatgagcaa	gaagccatgg	ctgtcaatgg	300
acgaattctca	gtccaatact					320

<210> 508
 <211> 395
 <212> DNA
 <213> *Pinus radiata*

<400> 508						
ccggctccgg	cgggtggagag	catcagcctt	ggagttacag	accaggaaaa	tacaagatgg	60
gtagatctcc	ttgctgtctc	aaagaggggc	tcaaccgcgg	ggccttgacc	aaaaggaggg	120
atatgattct	ctccgaatac	gttcgaattc	atggcgatgg	tggatggaga	aatcttccgg	180
aaaaagcagg	tcttaagaga	tgtggaaaga	gtttcgagact	acgctgggtg	aactatcttc	240
gtcccagat	taaacgcgga	aacatttgcc	ccgcccagga	ggagcttatt	attcggtctc	300
atgcctcttc	tggcaatcgg	tggtcaatga	tagcaggacg	actgcctggg	cgaacagaca	360
acgaaatcaa	gaactactgg	aacatcatc	tgagc			395

<210> 509
 <211> 658
 <212> DNA
 <213> *Pinus radiata*

<400> 509						
gccatatcta	catgaatctc	gacatcttca	tgcgatgaag	agagcgagag	ggtgtggtgg	60
tgcgtttctg	aacacaaaaa	agttagagga	ctcgaaagca	aatgtggata	atggaagac	120
accagaagga	catactgcgc	aggctgggag	ttcttcaggt	ctggaagtgc	tgaactctga	180
aaatggaaat	ggaaattcta	cccaggagct	acatgggtct	tgtgggatgt	caggctcaca	240
agttactagc	attgcacagt	catctgaaaa	tggtacaact	tatcaatatt	ctcatactaa	300
tggagcatct	cttaaccact	atcaaatc	acatttccat	atatcagctt	ttaccgcgtc	360
ctcaagtggg	ggcgaggaag	gcagcagtc	aaaagggtgg	agcataatat	ctggtggatc	420
acacaacaga	gtttgttgga	tcagtgaaag	tgtgaaataa	gatgttagtg	gtgagaatct	480
cacgtgctgt	gttctccgtg	tcacattgac	tataaagata	ggtctcaatg	agtcgcaaga	540
tcataaaatg	aaacagattt	tataaagctc	tcgcaatttt	atgggttcaga	ggccattatc	600

agtaaaacag gcaaccgctg atggtttgtt ttggaatggg ttgcagtttg cacaacaa 658

<210> 510
<211> 351
<212> DNA
<213> Pinus radiata

<400> 510
cacgagggcc agagctgttg ctgttcccag aagaggatat catcagctgt ccagtttgtc 60
ctaagagact acagaagaag aatatagaag atgggttagat ccccttgccc cccaaaagaa 120
gcgcttaacc gtggggcttg gacaggcatg gaggatacga ttctcacga gtacattcga 180
gttcatggca gtgggtgctg gaaagctatc tccaaaagag caggtgagtg tcaataaaaa 240
tttaatagca attcttttta tttagcagaag gaagtagcaa tctccaggt tatataatac 300
aattcatcag tcataatat cagaaattta tagtcgagtc taagagggag a 351

<210> 511
<211> 754
<212> DNA
<213> Pinus radiata

<400> 511
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aaggctgaag atggagtgtt atatcctctt gaaaaaagct ttttcttctt gcctaaaacc 120
ccgacacctt ttcttcacga ggagattgaa tatcttgagt ttgagagaca tggagctgct 180
ggtacagata gtatgtcttc acactatttt gatcttatta taaagctgaa gagttagcaa 240
gagcatcagt tccgaaatat tcagaggaat gaatatcaca atcttttcag ctctataaac 300
accaaggggt taaaaatcat caatttagga gctacagaaa ctatttggtg agttgcagcg 360
gctcttcaga attctgacga tgaagctgta gatccacatc ttgagcgact aaaaatctac 420
gtgatgggtg agctgtgtgt gaagacagcg acgaagagga tgaagacttt gtgtgcagaa 480
acgatgatgc tggatctcca acagatgagt cagaagaaga gggatcagat gcaagtgaga 540
gtgcagaggt caagcaacct gcaaaagaag aagtaaaaga aaaaaaggcg gtggctcccc 600
aggcaaccga gaccaagaag aagaagaagg gatgacgagg aagagggagg aaagaaaaag 660
cagcgggcaa agaagaaga tccaatgag ccaagaaga ccatgacttg gttttgtcct 720
tttctcaagt gaaagagaga tctgaaaaag agtg 754

<210> 512
<211> 424
<212> DNA
<213> Pinus radiata

<400> 512
cttctggtg ttgttgctgt gatttctctg ccattctgtg ttgggtttat ggttttagct 60
tcactacaag ccttttagca gctcacaaa gctcctttgc agtaggattg ctctcccc 120
gtcatattcc atgtttccca attcaggaat ggggttaaat ccttcagtg catcttcaga 180
acctctagct caggtctccg gatcgatccc ccatcaatat tcaggctccg aggaagacc 240
taaaactgac atcgatgaaa gaaagcagaa gagaatgctt tctaacagag aatctgcaag 300
gaggtccagg atgagaagc aacagcattt ggatgaattg agagcccgaa cagctcatct 360
cagagcagag aacagtcata tgctaacaaa attcaacatt gcttcacaga aatacatgca 420
gctg 424

<210> 513
<211> 487
<212> DNA
<213> Pinus radiata

<400> 513
cgaggtcagc cgagaaggca cttgttaaca acagggctgga gtgtctttgt tagcgcaaaa 60
agactagtgt caggcgatgc attatttttt ctgaggggtg aaaattcaga attgcgggtg 120
ggggtgaggg gagttatgag acagcaaaagt aatatgccat catcagtcac attctagcac 180
agcatgcatt taggtgtcat tgctactgca tctcatgcag ttacaactcg gaccatgttt 240
actgtttatt ataaaccaag gacaagccaa tcagagttca ttatccctta tgataaatat 300

atggaggctg	tgaatagcaa	cctttcagtt	ggaatgaggt	ttaagatgag	gttcgagggt	360
gaggaggccc	cagaaaggag	gtttactgga	actataattg	gaatagggtga	cgttgatcct	420
tcagatggc	catcttcaaa	gtggagatct	ctgaagggtgc	aatgggatga	aacctgtgca	480
attccac						487

<210> 514
 <211> 648
 <212> DNA
 <213> Pinus radiata

<400> 514						
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ttctcttttt	cctgcggctc	gagcgtgagg	tcgatgtatt	cattcctgtt	aaattttctt	120
ttgttctctt	ttccattttc	gatgcctctg	tcgagtctct	ttttctgaga	tttttgcagt	180
cttcgaagagt	ttgagtttgg	cctcagcctt	ggaagtatct	cttttggctc	taggtaattg	240
aattgtaacc	ttcccgaaca	acggcggtag	tggtctggag	attcgcattg	acgaagataa	300
aatggcgcaa	ctcgaggaaac	agcctaataa	agccacgggt	cctcgccctg	ctgattctca	360
tagatctata	ccaacgcctg	ttctcaatga	aaactaccgg	cttgtcgacg	atccgagctt	420
gaacgcacat	atttcatgga	acgaagacgg	cactacgttc	atcgtttggc	ggcctgcgga	480
attcgcgcgt	gattttgtgc	cgaattactt	taaacacaa	aatttctcca	gttttgtccg	540
gcagctgaat	acatacggat	ttcgaaagat	tggtccagac	agatggggat	tcgcccaacga	600
gttttttcgc	agaggagaaa	agaaattgct	ctgcgagatt	catagaag		648

<210> 515
 <211> 315
 <212> DNA
 <213> Pinus radiata

<400> 515						
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tatatataga	gagagagaaa	tatacgtttt	tcagatttaa	gcattggcgt	tttaataa	120
gcattgtcatg	gcgagatgct	atttgtgtta	gaagttgatt	ttctgttttt	ttcttttcaa	180
tagtttagtc	caataaagca	gagatgggtc	gtgctccatg	ctgcacaaaa	gttggtctca	240
acaaggagac	atggtctgcc	gaagaggata	gttctcttgg	aagatatatt	caaacatcat	300
gtgaaggcaa	ttgga					315

<210> 516
 <211> 563
 <212> DNA
 <213> Pinus radiata

<400> 516						
gacacgtagt	ggatcaaaag	attcggcagc	agctcctgtc	tctgggttct	ctatgaattc	60
taacatgggt	gtgtctggag	gtctagatga	aagtgggttt	tcacagcctc	caccaaaatt	120
tgcaaaagatg	aatgctccca	cgagaacatt	cactaagggt	tacaagctag	gttctgttgg	180
gaggtcagtc	gatgtaaac	gtttcagggt	ctatccagat	ctgcgtgccg	agcttgaccg	240
tatgtttgtg	ctagaaggcc	agctggagaa	cccaagatca	agctggcagc	ttgtatttgt	300
tgacaaggag	aaggatgttc	ttctccttgg	ggatgatcct	tggaaggagt	ttgtcaataa	360
tgctcgattt	attaagatac	ttctctctcc	agaagtgcag	cagatgagtc	aggaagatat	420
ggagtttttgg	agtttccattc	caactcagca	gcagacaagc	agtagttcag	acgactgtgt	480
agctagaat	ttctctcgca	acatcagatc	agttctcaca	tcgcctggct	ccctggagct	540
attaagtgta	gatccaattg	tac				563

<210> 517
 <211> 392
 <212> DNA
 <213> Pinus radiata

<400> 517						
ttcatgcaca	tgagtggaaa	tttcggcata	tttatcgggg	tcagcccaag	cggtcatctgc	60
tgacaacagg	atggagtgtga	tttgttagtg	caagagagct	cagtgcgtgt	gatgctgtgc	120


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tttttattag gaatgagaaa ggacagttat tgctgggaat caggcgagca aaccgatccc 180
aaacgggttat gccatcatca gtgctgtcca gtgatagcat gcacataggt gttcttgccg 240
ctgcagctca tgctgcttca acaaaactgcc gcttcaatat ttctacaat ccaagggcaa 300
gtccatcaga atttgtcata ccattgtcta agtatgaaaa ggcagtttat cacacacgag 360
tttcaattgg aatgcgcttc cggatgctgt tt

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<210> 518

<211> 319

<212> DNA

<213> Pinus radiata

<400> 518

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tttaagcatt tcattgagtc ttaggtcacg gtttccaatc ctggcaggtc tcattattct 60
gtctctctgg caagatgggg agaactccct gctgtgaaaa agtccatata aacaaaaggcg 120
cgtggaccaa agaagaggac gatcgccctca tcgctcacat tcgagccccc ggcgaaggcc 180
gctggcgcttc gcttcccaag gccgcagggc tgatgcgatg cgggaagagt tgcaggctcc 240
gatggataaa ctacttgcgt ccacatctca agcgtggaaa cttctcagaa gaagaagatg 300
agttcatcat caaactcca

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<210> 519

<211> 513

<212> DNA

<213> Pinus radiata

<400> 519

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accgtcgaga gagcttcata tctaaccaat acataaacacc tgtatggctt catagcttca 60
cagcaacagg gcacccatgg ccgagctcct tgctgggata aaatgggagt aaagaaaaggc 120
gcctggactc tagacgaaga taaaatactc gtgcattaca ttacaaaaca tggccatggc 180
aactggcgcg cactggccaa gcaagcaggg ctctctgcgat ttggaaaggc ttgtcgctcg 240
cggatggacga actacctgaa acccgacatc aaaagaggga attttatgctc agaagaggaa 300
gatcaaatata ttaatttga tgagctcata ggggaatagat ggtccactat tgcctcgtac 360
ttgccaggaa gaaccgcacaa tgagatcaag aacgtgtgga acaccattt aaagaaacgt 420
ctcgcgcgta tgaaagccga ctcggttgca ctgcagcgac agccaacgcc tgcgtctctcc 480
ctggcctcat ccactacaga aatgacgtgc cac

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<210> 520

<211> 219

<212> DNA

<213> Pinus radiata

<400> 520

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gtgcattgaa gccaatggcg gaggggctcc tggacgctcg cttcccaagg ccgcagggct 60
gcagcagatgc gggaaagact gcaggctcg atggataaat taccgtgcgc ccgatgatgt 120
caagcgtgga aatttcacag aagaagaaga cgatcttata atcaaatcgc actcactcct 180
cggcaacaag tggctctcaa ttgcaggagg attgccagg

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<210> 521

<211> 392

<212> DNA

<213> Pinus radiata

<400> 521

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cttagcgacg gtteccaatc cctagtcctt gcactttact cgtctctctg tgaagatgag 60
gagatttcgc tgtgagaagg gtaatacaaa caaagggggc tggacccaac aagaagatgc 120
ccgactcact gcctacattc gagccccagg cgaaggcgcc tggcattccc ttcccaggcg 180
cgcaggctcg ctgcgatgtg ggaagagttg caggctgcga tggataaatt acctgcgtcc 240
taactcgaag cgtggaaact tctctgaaga agaggacgat ctcataatca aactccacaa 300
ctcttggggc gataagtggc ctcttatcgc gggctcgattg ccggggccgga tggaaagacca 360
gataaagaac tattgggata ccaactttaa ga

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<210> 522

<211> 447
 <212> DNA
 <213> Pinus radiata

<400> 522
 aggaaggagg gttcatattg ctgagcctga ccagggttca gatccacca aggcaatcaa 60
 atatgagcca cctgcagtaa gctgtgatca ggagaaacct ttgcaaaagt tatcaaaaga 120
 aactcaagtc aaacagcacg gcaacccac caggagctgt actaagggtc ataagcaggg 180
 gatagctctt ggaaggcccg ttgaccttac taagtttgaa ggttacgagg aattaatttg 240
 rgagcttgaa cgcattgtca acattgaagg agaactacgg aatcctagca aagggtggca 300
 gggtgtgac acggataatg aaggagatat gatgcttggt ggtgatgac catggcaggac 360
 gttctgtgac attgtgcgtg agattttcat ctatacacga gaagagggtg agaaaaatgac 420
 tcttcaaaag catgcacaaac tgcaagg 447

<210> 523
 <211> 822
 <212> DNA
 <213> Pinus radiata

<400> 523
 tggaaacca aagctccgat aacaactaca tggctcggtt tgtctcggtc aatgtcgtgg 60
 gattgcagta ctacacgggt accatcaatg gccgtgaaat gattcgacta gttcgcgagc 120
 ctgaaaatcg gtacgacccc aacgccatca aagttctcaa catgagcgcc cagcagggtcg 180
 gtccacatcga gcgcgtctgt gcgctggcac tggcgtccca tggttgatcaa tccctaattt 240
 taatcgaaag aatcgtgtcc agggctctgc ataaagggtc ttacaagtta ccttgcacaa 300
 tctacatttt cagtcacagg gattcgatgg gcatggctct tcaagtgtct aaagggggccg 360
 gattgaattg tattactcgc gaggaccaag agtttttaac ggccgaatcc attgctgcaa 420
 aagaatata tgaagatcca ggggtgaagg aggttagaag ggtcgatgat atctttgggtg 480
 actttaataa tcccaagaag aggcagtcga tggaggcttg cgagcttga acttcgcacac 540
 tcttcacaga ccagaaggag gcattggctt ggatgggtgca gagggagaat tcttcgcaac 600
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 atgttttgac aaattttgag acgaatggaa ggccgaagcc tttagaggtt ggaattttgg 720
 cggatgatat ggggcttggt aagacgctgt cattgtcttc gctcattgca acgaaccgtc 780
 ccggtgccaa gctccctctc gttgtagata ttgctccctc tt 822

<210> 524
 <211> 390
 <212> DNA
 <213> Pinus radiata

<400> 524
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 aagctcaacg cccccaattt gtgattcgat gtttccctcc cactacacag cgttggcatt 120
 gcgctgcgca atgtggagaa accccagaga gtcgggacag agccattccc agcctccaga 180
 gaaagataga ggaataaactt tcggccaatt taagggaatc cgaatcgaa aatggggaaa 240
 gtgggtgtcc gaaattcgga tgcggagatc gaaggagagg atctggctag gatcctataa 300
 aactctcgag caagccgccc gtgcttacga tgcgcgactc tattgctcta gaggaccaa 360
 cgccaaattc aaattcccca attccgtgcc 390

<210> 525
 <211> 299
 <212> DNA
 <213> Pinus radiata

<400> 525
 cgagcaacag cgaagccgat ttccaaagat ggataggagg aaactcatga agatggctgg 60
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 tgccacggga gatgacaaga gacttcaaat tactctgaaa agaattggcg tgaataacac 180
 cctctgctatt gaagaagtca atatttttaa ggatgacctt gttatctatt ttgctaacc 240
 aaagggtccag gcttctattg ctgcacacac atgggtgggt agtgggcatc gcaacaaa 299

<210> 526
 <211> 101
 <212> DNA
 <213> *Pinus radiata*

<400> 526
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 gcgcgcgaac gggctgctga agaaagctta cgagctctcg g 101

<210> 527
 <211> 361
 <212> DNA
 <213> *Pinus radiata*

<400> 527
 atcgtctcgg cccgagcaat tttgcttctc tgctaaacga tgggaagagc gccttgctgt 60
 gccaacgggt acagaagcaa gggagccttg accaagggaag aggatgacag gcttacccaa 120
 tatattcaag ctcatggaga aggatgctgg cgctctctcc ccaaggccgc aggtctgctt 180
 cgggtgtgaa aaagtgtcag gctgagatgg ataaattatc ttgcccttga tctgaaacga 240
 ggaggttttt ctgaagatga agacgatctt attctcaaac tgcacgcctt cctcggaagt 300
 aagtgggtctc tgatagcggg tctgttgctt ggtcgaactg gccacccaaa tcaaaactac 360
 t 361

<210> 528
 <211> 337
 <212> DNA
 <213> *Pinus radiata*

<400> 528
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 ggaggttttt ctgtttttacg aaggcatgct gatgaatgct ttccacctct ggacatgagt 120
 cagcaaacctc cttcgcaaga gctggtagcc agagatttgc atggaattga atggcgattc 180
 gcccatatat tttagagcca accacggagg catttgctaa ccaactgggtg gagggttttt 240
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 gaaactgcgtg ttggagtggg gcgtgctatg cgtcaga 337

<210> 529
 <211> 491
 <212> DNA
 <213> *Pinus radiata*

<400> 529
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 gggagagatg cctggattcg acgaacacca ttccgtata gagaatacgc gcttaaagga 120
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 tgacgggctc ataattaatt gtggaacctt gacggattta gataaacctg tggcactggg 360
 acctgcaatg aacgggtgtg aggagttgat ccggatggca caaactgat agcctctctg 420
 gttgaaggat gttaatgcgg gcagcgtgaa agagcttttt gaacttggaat gaggatggca 480
 gatcgtttcc t 491

<210> 530
 <211> 350
 <212> DNA
 <213> *Pinus radiata*

<400> 530
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 tggctgtgcc aggcacaaga agcggacagc aaagtcttcc cagctgctct tcttgctaa 120
 agcgccctta ttacagctgt tcatgcatc cctctcgagg acggtgtctt ggaagtgtgga 180

actactgaag	tggagcgaga	agaccctgg	ctagtccaac	gcaccataag	cttttttttg	240
gagtagccca	aaccgatgat	ttcagagcaa	tctacatcca	gccacagtg	ctcagacaga	300
gacgaaaagg	atcaagtggg	catgggtcaca	ataatgtcct	ccgacagcat		350

<210> 531
 <211> 437
 <212> DNA
 <213> Pinus radiata

<400> 531	
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aagaccctgt	tgcgcgcgcg
caggcagagt	acctgatcca
cggtctctcc	tctctgggtg
gggcccgcgc	cttaattaat
taaacaaaat	ctctgttttt
cctgagcttt	gaaaaaac

<210> 532
 <211> 508
 <212> DNA
 <213> Pinus radiata

<400> 532	
gaagaaaaac	aactttccat
atgctcacat	ttttggttgg
caaacacagc	ttcaagaaaa
ggagccaatg	agaaaagattc
acatttgcgt	gggatgaggc
atggcagatg	tggggtcabc
cttactccaa	gaggtcggtta
caggccagtg	attttaaaat
tcactccaca	cacttgtgtg

<210> 533
 <211> 374
 <212> DNA
 <213> Pinus radiata

<400> 533	
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gagagggagg	catcgagagg
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tgaaggcgaa	gatctgattt
gccgttgaat	tctgcccggg
acctccgcac	cattcaagaa
catggaagat	acga

<210> 534
 <211> 487
 <212> DNA
 <213> Pinus radiata

<400> 534	
acgatcttca	ccctcgggtg
ttcggagatc	tgtagtctca
ttaaagatac	tatgagtgat
gtgatgtgaa	tgcaaaactac
ggctgtacaa	tctactgggc
ctgcagagga	aataagagaaa

gggtttctaa	tagtcaatga	agaagaagg	tagaagcagc	cttgccctatc	taactgattt	420
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<210> 535
 <211> 372
 <212> DNA
 <213> Pinus radiata

<400> 535						
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atgataaccc	acagaacacg	aataagaatt	cttcttcggg	gggaactggt	gatgccggaa	180
gctttgaatg	caacatctgc	cttgaacttg	ctcaggaccc	aattgtgaca	ctctgtggtc	240
acctgttctg	ctggccttgc	ctgtacaaat	ggcttcacgg	tcaattcgaag	tctcaagagt	300
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<210> 536
 <211> 836
 <212> DNA
 <213> Pinus radiata

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tgagtttgga	caatgcctcg	ccgctcgttc	caatgtggat	ttgaaggata	agtgccgcaa	300
tatgagtgtg	agtgctagt	gccaaagttc	aagggataag	gtaagagact	caagagtaaa	360
agctattgcc	tctctgcctt	atctcatcag	tactgtctgaa	tctacttctg	tattctcaat	420
agaagcaaca	acctcaacaa	ctccagataa	tcttattttcc	cctaaaagt	catcaaatgg	480
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<210> 537
 <211> 478
 <212> DNA
 <213> Pinus radiata

<400> 537						
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tcccaggttt	tggtaccctt	tatgtaccat	acgggttccc	catatggcac	acttttagac	180
ccacaataac	tcaaaacttc	aattgtttata	agccaacagc	tgtaattgcca	actgtctccaa	240
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ctgcaatgaa	accctcagaa	ctgtcactca	aatatcatgg	aagacccccc	tctagacaat	360
cagcttttca	ggccaaaccca	tctctcaatg	aaagcagtag	tttgagtccc	agcagcaatg	420
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<210> 538
 <211> 565
 <212> DNA
 <213> Pinus radiata

<400> 538						
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ttccgtatgg	tcactatgga	atgccatcac	ctggcaatgc	tgaagtata	acgactttag	180
cacttccaaa	tgctgaagca	gaagcgaagt	cctcggaagg	caaagagcgg	aatacaatga	240
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gcaaggcaac	atcggtgact	gcaaatgagg	ccatgtcaca	aagtggggac	agtgccagtg	360
acggttcaag	cgaagggaag	gaggaatata	acactcaaac	tgaagtacaa	gtggcgagaa	420
agagaagtgt	tgatcaaatg	atagtagatg	gagccaatgc	tcagagtacc	aattattcaat	480
catataatcc	ccaggctgga	gaaccctatg	tgacttccgg	cgggcatgca	atgggtaatc	540
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<210> 539

<211> 350

<212> DNA

<213> Pinus radiata

<400> 539

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gagactagaa	ctaaggatca	agatgaaagg	ttgcctgaga	atgggaagtg	ttggagcaac	180
aagcagacat	tggatcaact	tacagaacag	atggggcagc	tggcatcagg	gacgcaaaat	240
tgaaataaga	ttatagaggc	tgcttagtag	tgcatatcac	tgctagttct	gctaaaattt	300
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<210> 540

<211> 479

<212> DNA

<213> Pinus radiata

<400> 540

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aagagtgtct	gtgttgccca	tgatatctct	tctgatgaac	aagatctgat	aaatagactt	180
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<210> 541

<211> 580

<212> DNA

<213> Pinus radiata

<400> 541

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tctaatgtga	tcgaaaatgg	acaaagcttc	tctgctcggc	gatgctgtct	cttatataca	180
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agaagtctgc	attgttgccc	gagagggcat	aataagaatt	cagtgactta	aacataatca	420
tcctgttgcg	agactgatga	tagcaactgca	agaacttgat	ttgggaagtc	tccattgcaag	480
tattttctac	gtgaaggatt	ccttaatttat	ccagacagtc	attgttaaaa	tgaccagagg	540
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<210> 542

<211> 445

<212> DNA

<213> Pinus radiata

<400> 542

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ataatgaac	gggcgtctgc	ggggaatcgc	aaaatctcca	aagacgcgaa	ggagacggtg	420
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<210> 543

<211> 682

<212> DNA

<213> Pinus radiata

<400> 543

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cgaggtggcg	gtcgagggcg	ccgtggattt	ggcaacagag	aatcgacgga	gtttggacgt	540
ggccgtgggg	gaggtttataa	tggtgaaacgg	aacttcaacc	gcgagaacaa	tgccatttcg	600
ggttctcgtg	ttgggttcta	tgacaacaat	tctgatttga	tccccagccg	caatgaggat	660
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<210> 544

<211> 372

<212> DNA

<213> Pinus radiata

<400> 544

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tcataactgg	ctcaactcac	ctgtttgagt	atctgccatt	tttggatggt	tgtgtaagct	180
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caatgccacg	ggtagaaata	atttccagga	acttcatgga	catggtggca	gcattaccgg	300
ctgcaaaagt	agatcgccgt	tatgataagt	cattgcattt	gcgaagcggg	ctgaggtctc	360
tgactcctgt	gc					372

<210> 545

<211> 444

<212> DNA

<213> Pinus radiata

<400> 545

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ctgggattcg	aatctttgat	caaaaaatgg	caaatattac	cttttaagcat	gcagggcccag	180
ctcatatttt	tcactctacg	aattccgttt	actatttcat	gaaccgggga	tttatgggct	240
acagcgcaat	tttattataa	ggcttctttc	ttctctttga	ctttcatata	gctgacatga	300
atggcgagaag	agatggacac	accgacaaaa	acaacaaga	cgctcatcat	acaggaaacaa	360
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<210> 546

<211> 570

<212> DNA

<213> Pinus radiata

<400> 546
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 gagattcgcc tccttcagaa tcgaaccogg ctctggctcg gcacctttga caccgcagaa 180
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 gttcctatag atgtatatag gagtgcacca gttcgggtaa gtgcataac tggtagacca 480
 gttcggataa gtgcttatag tggtagacca gtttacttt agcggaatcc 540
 gagctgaaa gctcctgcag ccatgaatcc 570

<210> 547
 <211> 532
 <212> DNA
 <213> Pinus radiata

<400> 547
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 aagtggaaa ctcatagtag tgaacaaaag gatcttggtta caataccaac aaaggtggaa 120
 ggaaggatcg gcaatagaga gaatagttta gatgtcacac gtggtggggc tctttgggac 180
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 agaaaacttga agtctctgat aaaagtggct ttgaactttg tttcacctga aaatttcaaa 480
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<210> 548
 <211> 447
 <212> DNA
 <213> Pinus radiata

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 cagaaaagct tcagagctac aactgtgagc ggcctcgtca ggcctcagca ttcggctatc 360
 aaacatcggt atgtattcca acacctaag gagttgtga gttgggttcc acggatttaa 420
 atccgcagaa ctgggatttg atacaga 447

<210> 549
 <211> 1163
 <212> DNA
 <213> Pinus radiata

<400> 549
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<210> 550

<211> 545

<212> DNA

<213> Pinus radiata

<400> 550

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ggaagacaga	acttgagacc	catgtacagt	ctggaaacct	gtccgtgtat	gttcattatg	480
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<210> 551

<211> 353

<212> DNA

<213> Pinus radiata

<400> 551

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<210> 552

<211> 448

<212> DNA

<213> Pinus radiata

<400> 552

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gcttctgcgaa	gtggttgggt	tctgtgcacg	gacacagatg	aactgctaac	catgtcaaa	420
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<210> 553

<211> 883

<212> DNA

<213> Pinus radiata

<400> 553

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<210> 554

<211> 310

<212> DNA

<213> Pinus radiata

<400> 554

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ccactctccac	caactctccc	tcattgtct	ctacccccct	ctcctagtta	tgatctctga	240
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<210> 555

<211> 463

<212> DNA

<213> Pinus radiata

<400> 555

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tggaatgcagc	aaggagaggt	ttgctgaagt	ttaatgttga	cgagggaacaa	attgaaagaa	360
tgactaggtg	gcactcgatt	gcaatgggtg	gaaagctttc	aagtggagcaa	gctgcttcag	420
gcgttaaagt	agatgcaaca	gcattgaata	agtttgcagc	ggg		463

<210> 556

<211> 496

<212> DNA

<213> Pinus radiata

<400> 556

agatgagtg	agtgagttcg	gctcggagct	gtgtcgaggt	tttgttgggc	agaggctgct	60
ctgtggagcg	gacgcctcgc	cggttgagtc	gggtcgcaaa	cgggcaattt	gcgatgtgga	120
atgtgcagaa	ctgtggaagt	agggttaagt	gaagacaatt	gtgcttctga	tgatcgggag	180
catatagctt	taatcgacta	tacgtttgtc	ctttgttagt	tcattggggt	ctagtgtgtt	240
cagtggagta	gcgtgcacga	gtttgatcgg	cgaaaatgaa	gagtccttca	accagctgcc	300
ttttctcatc	agtgaggaggg	gagcagaaga	gcataaattc	tgaactctgg	catgcttgcc	360
ctggaccctc	tggttctctg	ccctcagtg	gtagtgtgtg	gtattatttt	ccacaaggcc	420
acagtgaaca	ggttgacgct	tctactcaga	aggtagctga	cacgcacatt	ccaaattatc	480
ctaattcttcc	ttatca					496

<210> 557

<211> 642
 <212> DNA
 <213> Pinus radiata

<400> 557

cctcaaggta	caatgggatg	aaatatcagc	aattgcacga	ccagagagag	tttccccgtg	60
gaaatagaa	ccttcattaa	ctccagtgcc	agtgaaatcct	ctgccagtag	ccagggggcaa	120
gaggcctcgg	ccaaatatat	taccttcac	ttccgatgta	tcagtgcatg	acaaggcccc	180
agttggattct	actcaggtgc	acaggtttcc	aagggtcttg	caaggtcaag	aagttatgac	240
cttgggggga	tctttgggtg	acggtgagtt	ggagagtggt	caaaagatgg	ttgcatgggg	300
cggatcaaaa	ctggatgatg	tcaaagcaga	aggatgggtg	tgtcaaagaa	gggtgggttc	360
agaaaaatgg	atgcgcgcac	ttaggcata	ctcactata	tcagatactt	tctcaagttt	420
tcaacctgtg	gggggaagtgc	aagaattccg	tggttcatga	acaaatagta	tcctgggaaga	480
tgggcagcag	ccaaagcttt	caagaaaaa	gtttcaggac	caagagggta	aaattgttga	540
tggtatcaga	ctgtggtcaa	tgagttttcc	aaacagctta	caattgtgag	agtcacaaatg	600
gaagatgtct	gcgacctctg	ctgcccacac	gcacaagcag	ag		642

<210> 558
 <211> 653
 <212> DNA
 <213> Pinus radiata

<400> 558

ggaattgaca	agtgatagtc	acaggcaagc	aacacttcag	ttggaagctg	aagttacagc	60
gtggcacatc	agtttctgta	gcttgataaa	aagtcaacag	gattatatgt	gtgacctgta	120
tgagtgggca	cgtctaatgc	ttgttcagct	tggggaatgaa	gcacagtggt	aacgagggaaa	180
cgccccacct	attttactac	ttgtgatgt	atggcaacaa	gtacttaaaa	gattgccaga	240
caaggttgct	tctgagttca	tcaaaaagctt	catctctgtt	gttcatgcta	tagtgatgca	300
gcaagctgat	gaacaaaagc	gcaagaagaa	agcagaaaaa	atttctagag	agctgcacaaa	360
gaaaaatgat	gcttttcgca	atatgaaaa	gaagtattat	agttctgtat	caatacctgc	420
tagggcagat	gctacaacag	agtcctcaat	tgaattgggt	cacacagatc	ctttggcaga	480
aaaaagagca	gagattgaaa	tatatataaa	gcggttagaa	gacgaaaaag	ccaaactatc	540
aaaatcgccg	agaggaacca	gagaaatgac	cttaataaat	attcaaacag	gccttccagg	600
tctattccaa	gcactgagta	gttttttcaag	tgtgtgtgca	agtttcccttg	agg	653

<210> 559
 <211> 100
 <212> DNA
 <213> Pinus radiata

<400> 559

atggctatgc	gggaggcgga	gcgcatcacg	gggcatatga	gtcccgagga	ggacacatcg	60
ctgcacaaag	tggtggagaa	atctggggcca	cggaaactggt			100

<210> 560
 <211> 385
 <212> DNA
 <213> Pinus radiata

<400> 560

gttgccgccc	tgcaaaatc	gccagaaatt	tattgccgaa	ttacttcaag	cccaacaatt	60
tctcaagttt	tggtcgccaa	ctaaatacat	atgggtttcg	gaagattgta	ccagacagat	120
gggagttctc	aaatgagttt	tttcgcaagg	gagaaaaagca	gctactttct	gaaatacaca	180
gaagaaaagg	tctaatacaa	cctcctccac	cacctgagaa	cagatccatt	tcaacctcta	240
actctgggtga	tgagcaaacg	tggtcttcca	cctcctctcc	taactcttcc	acgggggtgg	300
atgcctctag	ccataagaat	gcaattgaag	aaaaatgagaa	actgagaaa	gaaatctgt	360
tattggtatc	tgagctgaca	caaat				385

<210> 561
 <211> 328
 <212> DNA

<213> Pinus radiata

<400> 561

cccaatgga	ctgcagcacc	attcctccga	tgatgcta	ggcgatggcg	ataagagaa	60
tgggggtgag	acaggcgact	ctgtatgtcc	agagctctgg	catgctctgg	ctggccctct	120
catatctctg	cctcctaagg	gcagtcgtgt	tgtgtacttt	ccccagggtc	acctggagca	180
gattgcagac	aatgagcttc	acagggtggg	ccgtggctcc	ttcctcaaca	tcaaccatgc	240
ggctgcaccg	atggcagagg	aagcatcttc	tgcagcagcc	ttgaatatac	cgccatcggt	300
cataagtcag	ccgtgaacca	acagatgc				328

<210> 562

<211> 440

<212> DNA

<213> Pinus radiata

<400> 562

aggaaacgct	cacgctctta	aagattagat	cagaaatgga	ttctaagttc	cgcaagccca	60
ccacaagaag	tcccttatgg	gacgaagtct	caagggtctc	tgcggagcac	ggttaccaga	120
gaagtcccaa	gaagtgcggg	gagaaattcg	agaatcttta	caaatactac	aagaaaaaca	180
aagaaggcaa	agcaggaagg	caagacggaa	agcattaccg	tttcttttag	cagctcggaag	240
ctttgtacgg	aggaacaact	attgatgctg	ccgacagttg	ttttggcgta	acaacacgga	300
caaatttaac	cgaaagtcca	ggcctggact	ttaacggaga	cgaggcctcg	cagaaatacg	360
ctgacactca	ccacaacagc	gagggcttta	gtttgtcttc	ggattctctc	tcggatgacg	420
agtagctca	cgatatacag					440

<210> 563

<211> 359

<212> DNA

<213> Pinus radiata

<400> 563

ggaaagtcca	acatagaagt	cttctgtgca	ttcatagaat	aaatattcta	caggctgcac	60
tgtaatcttag	gcgagaaatc	gaataaaaata	tacatttgtt	tgttttacag	ggagttggca	120
gtagagcatt	ccatctcccg	ctataagaaa	cccaagctct	ccaagaatgt	cgtttccgag	180
cgccgccgaa	ggcagaaaat	gaacaagcct	ctctacactc	tgagggtctc	ggttcccaat	240
atttccaaga	tggacaaggc	atcgatttta	gcggacgcca	tgaatattgt	ggagaagctg	300
aagcaacagg	tggagagagc	tgagctctgac	gttcaatcca	ccaacgtctc	ggctctatc	359

<210> 564

<211> 249

<212> DNA

<213> Pinus radiata

<400> 564

aggaattcca	acatacaatg	tgatgtctat	gcacaggatt	ccattgagtt	gttgaagcag	60
agtgggattg	atttcgagaa	gaatgaggag	aagggatctg	attcgcatcg	tttcggcgag	120
cttctcatgt	catcgggctg	tgtgttgaa	gaaaatgtga	attggattac	cttccacagt	180
ggatatgact	ttgggtacgt	gttgaaattg	ctgacatgcc	agaacctgcc	ccccaggagg	240
tcggatttcc						249

<210> 565

<211> 542

<212> DNA

<213> Pinus radiata

<400> 565

agaaggttgg	aatggcttag	tccgctcatt	tgatggcgaa	cagatctttg	tggggagggt	60
cagactttga	ttatgagaac	gaagccgata	cgagggaagg	tccatggact	gtgggaagg	120
acatgcagct	tggtattgta	aatttgcaag	gagaaggagc	ctggaacttt	ctcgccagag	180
catctggcct	ccagagaact	ggttaagagc	gccgggctaag	gtgggttaac	tatctccggc	240
ctgatctcaa	ggggagacaag	atcaectcct	aagaagaacg	tttgattatt	gaactccatc	300

gccgttgggg	aaataggtgg	tctcgtattg	cacaaagttt	accgggaagg	acggacaatg	360
aaatcaagaa	tttctggaga	actcgtatga	agggaaaaact	aaactcagaa	actcagaagg	420
acatcgccgg	cgtaggatgca	gacgacggag	tacagtttga	aagcgaattg	ggatcttgcc	480
gcctccagct	tatttcatcc	catgcactgc	ctgaagtaga	cgtagcagag	ccttcgagta	540
ct						542

<210> 566
 <211> 358
 <212> DNA
 <213> Pinus radiata

<400> 566	
gggacagttag	ggaggaagag aagacgaatt catcgatcca gtattggtgt aactggtggc 60
agaggactac	ggcattttcag catgaaagtt tgtaaagaa tggagagcaa gggctggaca 120
acatcacacg	aggttgcatc tgaattagt gccaattttg tgaatccaaa cagcacacat 180
ctttcaccaag	atcagcaaca gtttgatgag aagaacatta ggaggagggt gtatgatgca 240
ctgaacgtac	tgaatggcat ggacataata tcaaaaggaga aaaaggagat tagatggaaa 300
gggtcaccta	caacaaattct aagtgcatt gaacggcgtaa agactgagcg aaagaggt 358

<210> 567
 <211> 722
 <212> DNA
 <213> Pinus radiata

<400> 567	
atgcccccca	gcatttgcca gggcttacaa cttgaagacg cacatggcca ctcattgccc 60
caacgcgtct	aaacctcatg tgtgccctca cgcgtcgtgt gcgcggtcat ttagecgcaa 120
gcattgacct	ggcgctcact tggctcagcat tcatcgtgac gattccgtgg tttctacgcc 180
ctctcgctca	atgaagtcta ttggtgtcga cagtggccgc agggagtggg gtgacaactg 240
cggcaaaagga	acaatcgccg catcgtgcca gtgttcattgc gccgatatac agtagttgcg 300
gatcgcgctg	ctctgttttaa acactatgcg tatatgccat gggcgagtat atttcgccac 360
tcgcttcgtc	gcagtcgatg gttgatctgt ccaactgcgtt ctctcgactg atcattcctc 420
tattctgcgt	atttccgacg tgttgcgat cgtaccgttc agccatagat gctgaaccca 480
gtgacgaacg	cgatcgcgag ttgcctcatt tattcgtgac ccaccacggg ctggacacta 540
tttgtctaac	tatctcgtcg ggatacttta tctgttgtaa actccttatt caacgattct 600
tatgagccct	tcgtaaactta gcagatccca ttttctttaa ctttctatta tattttggaa 660
ggcgcatcgg	cgtgattcca ccaatactgg aaataccatt atttatgcat ccaaaaaaaa 720
aa	

<210> 568
 <211> 489
 <212> DNA
 <213> Pinus radiata

<400> 568	
ccacgctcca	attttctgta gagtccgag gaatttccaa ctgaggggta tttcgaagga 60
aaacgcggcg	cgggagacat ttgatgggtt cttgagagag gaccacgaga aagtatccca 120
actggctcact	cagcactaca aggtccagct cgagaccaag gaaatcagcg tcaagggatg 180
gaactggggg	tctactgatg ttcaaggcaa cgaatctcgca tttgtcgttg caaacaggac 240
cgctcttgaa	gttcctctcc gatcaatcac caactcgaa atcgctggaa ggacagaagt 300
ctctctggag	tttagcacgg cgcccgcccc atcagctagc aaatccaaaa agggcgcccc 360
agacgaattg	acagaaattc gattctatgt ccttggcacg cataccaagg acgatgacga 420
cgaggctgat	atcaccaaa atgacgagga ggtttctgcy gctcaggcgt tccatgacat 480
gatcaaggga	

<210> 569
 <211> 490
 <212> DNA
 <213> Pinus radiata

<400> 569

ggttctgggt	gcgtgaaaa	ggaggatcat	tctcctgtca	tcatcaactc	tcagtcagggt	60
tattgccagtc	cccagcagtc	atcacagatg	cctttagctg	gctacatgtc	acctcatggt	120
attcccatc	agcacactga	cgatgccgcc	tcgaaaagaga	ctcagtcacct	tcgcccggagg	180
tgcttcaatt	gccacaccac	tgagccaccg	agttggaggga	gatcgacact	cacccccggg	240
aagatgttt	gcaacaagtg	tggtctttat	gagcgcactc	atttgcgacc	tcgtcctctt	300
cgttttgatg	aactgagagc	aggcaacaag	tcgcgaaagc	aaacaaagtc	aagtcccaag	360
ggcgcaagg	tcattcccc	ggggccctt	cctatcaaga	aggagcctgc	tgagatggag	420
gcgatctcgc	ggagatgtc	tgtttcatcc	agctcttccg	cccaatccgg	tggtgggtgg	480
tcgagtga						490

<210> 570
 <211> 447
 <212> DNA
 <213> Pinus radiata

<400> 570	
aagaaacctt	cttggggcaa
actgggtatt	gcaagggctg
atgggtagca	gagatcagat
cacagcagaa	gaagcagcgt
cgcaaggctt	aattttccgg
ccataatgtt	ctttcgccac
aaagctccag	gcaatttgcc
ggcacacagt	gccaacaatg
	aagctct

<210> 571
 <211> 146
 <212> DNA
 <213> Pinus radiata

<400> 571	
cgttttctga	agccctagaa
aaaggcagga	aatggcgaga
tggtgcttc	aaggatttg

<210> 572
 <211> 767
 <212> DNA
 <213> Pinus radiata

<400> 572	
gtcgccctgt	caaataatcc
tatgatggtc	tgaagcatgc
tcattgggccc	ctttgtttta
actagtttca	tcattgggacc
atggggatga	atgatgtcag
ccctccaag	ctgctagatc
aatctcagca	gcactagtaa
atgaatggta	ctttctcttc
agccaatttg	ctgagtcgtg
agcactctct	ttttgtgcgc
ttctctacgc	caaaaaatag
ggtgggggta	aggctcattc
agcaatcatc	gtaaccacct

<210> 573
 <211> 445
 <212> DNA
 <213> Pinus radiata

<400> 573

gaatcaggat	ggaggagcct	ctgcaaatta	taaattcatc	tccgatacag	cagcagcatg	60
atcatgatga	tgatgatcat	gggcatgggc	atgaggagga	ggttaattccc	caccctctgc	120
ttccccctcc	tgcgcacact	tgtattgttc	catacatcat	gcccgtttcc	acctctaccg	180
cagaaaaaca	cctctcccag	ccaaccaata	tgcgctttaa	cggcccgcaa	acagaggaa	240
acgacaagaa	acgggtaga	gagcacaaga	agcggtccaa	gaactggacc	aggggtcgaa	300
cctctcaagct	tataaagctt	cgaacagaat	ttgagcccag	gtttctctgc	agcggaagaa	360
agacggaaat	ctgggacgaa	atagctgagt	ctctgcgaaa	agaaacagtt	ttcagggaag	420
cccgagcgtg	cagagacaaa	tggga				445

<210> 574

<211> 731

<212> DNA

<213> Pinus radiata

<400> 574

cccagggtgtc	aggaatatatc	aggaccctcg	gaaaaatggt	gaattgggct	gaacaaagag	60
atcagaattg	aggtgagaag	agcaggcaat	ctctgatcag	aagaattggg	tacttggaat	120
cgatggatca	gcagcagccc	acaataccag	cactacctca	agtgggttat	ggcacaatc	180
catatatagc	cctctccgatt	gggggtcctc	cacacccaca	attagcatca	taccatcaac	240
agcttcaggc	ctctctgggtg	aaccagatga	gggaggttga	gcaggcgag	gacttcaaga	300
cccacagcct	gcctctgggc	agaattaaga	agatcatgaa	ggcagacgag	gatgtgaaga	360
tgatctctgc	agaggcaccg	gtggtgttgc	ccaaggcatc	cgagatgttc	atactggaac	420
tgaccttgag	gtcatggatt	catcacagag	agaacaagag	aagaactttg	cagaagaatg	480
acatatgtgc	agccatttgg	aggaccgata	tatttgattt	ccttgtttat	attgtgccta	540
gagatgaatt	caaggatgag	gggttggtga	tccttagggc	tgcgggtgcc	gtgcccttca	600
tggtgtcctg	ggataacgtg	ccatcttatt	actatgttgc	acagcaagct	cccaacgtgtg	660
cgctctatgc	tcctctact	cagcaaatga	ggtccaaagc	accgcacact	cctctcatg	720
cgagcagttg	a					731

<210> 575

<211> 441

<212> DNA

<213> Pinus radiata

<400> 575

cagggatcat	tgaactctgc	caggactcta	agtaggagga	ctgtcgacga	tgtgtggaga	60
gagattcata	aggaatacat	tgatgggaat	gggaatgcgc	cggcgaatca	ggccaggcag	120
ccaactttcg	gagagatgac	attggaagat	ttcttggtga	aagcaggggt	tgtgagagag	180
gatgcagagc	agggagatgg	gcagtcattt	ggggcggttc	ggaatgctct	agatggggaa	240
tttgtagcaa	atttggcaga	aagaaatggg	gataatagat	taggtatcgg	taattcactt	300
ggcctggat	ttggtgaaag	agggcatagg	aatggagaag	tgggtagttaa	caagagtgtg	360
gcagggggag	tgccctggact	ttctctgtct	cctactaatg	tcttccataat	catgctgcca	420
tggatatggg	gaattctgat	g				441

<210> 576

<211> 271

<212> DNA

<213> Pinus radiata

<400> 576

tttcaaaagga	gaaaaaagaa	atccattgga	aggggttgcc	taaagacaag	tataaatgat	60
gttgaacagc	ttaaaggctga	gaaattgctc	ttgaaaaagta	ggattgagaa	gaaagcatct	120
tattttcaag	aactcgaaga	acagattata	ggccttcaaa	atctggtgaa	acgaaacgag	180
catagatata	gttcagggaa	tactccatct	gggggtgtat	cgttaaccctt	catattgggtc	240
cagactcatc	cccgctgccac	tgttgaatt	g			271

<210> 577

<211> 315

<212> DNA

<213> Pinus radiata

<400> 577
 gggattcgcga gagctaccag acagaaaaagt ggtattctat ctctcagttct ttctaaccag 60
 aatgcccatc tcagttgtct tgctgctgca gctagtgtct ttgccacaaa gagcatgttt 120
 catgtttttct acaattccaa gacaagtcca gcagagttca ttatacctta tcagaaatat 180
 gtgaaaagt gcaagcaacc attgtctatt ggaatgcgct tcaaaatgag atttgaaaaa 240
 gaggataccg ctgagagaag gtacactggc atgataactg caatagggtga tgcagatcct 300
 gctagatggc ctggt 315

<210> 578
 <211> 384
 <212> DNA
 <213> Pinus radiata

<400> 578
 caagataccc actctgaacc aatggctatg gagatgggat tagtcattga cggagatagg 60
 tttctctcag aggggtgatg agatattatg ttggatggcg aggatctgtt gccagaaatc 120
 aacgatgatg ttggggaaca atttcttgca gagagtgcga cgtcaggggg aacggaaagg 180
 gctgagctcg cagcgcagga aagctctacc aaagatcagg atgagaacc attctgaaat 240
 gggaatttgt ggaaaaaaaa tcaaaatatg gataatctca cggaaacgat gggtcagctg 300
 gattcagaat caaatccttg agatttgtat ctgggtag atgcatattg tggagggaag 360
 gatttctctt ccaattttg ctag 384

<210> 579
 <211> 434
 <212> DNA
 <213> Pinus radiata

<400> 579
 gcgatggagc tgttagggat gcaggaggc tagtgctcgc cctctttctg gtgaagatgt 60
 atcgtttagt ggatgatccc tccacaaacc acatcgtttc ttggggagag aataacaaca 120
 gctctgttgt atgggcccgc aaagagttct ctgcgtctgt gctgccatgc tatttcaacc 180
 acgccaaatt tctcagcttt gttcgacagc tcaataatta tggatttcga aagacatttc 240
 gcgggcagtg cgagtttttg aacaaattat tcgagaaggg caagcagat ctctctttgtc 300
 atatccatag aagaagagcg tccaatagct cgccatgcc gatggaatat ggttaaatcat 360
 ctttatttat cccaatcatt ctacctacac aacactccaa tgttctggca ggcctctgc 420
 cttctctctc gta 434

<210> 580
 <211> 322
 <212> DNA
 <213> Pinus radiata

<400> 580
 aaggaacgga tcttaaccga agagaacctt tttcttcgta aaaagtgtgg tgatgaacat 60
 gtggatttgt cggctttttg aacacctcca gcacaactta gaagcatcca gaacattgat 120
 gtggagatc aactggttat aagacctcca actgtacaac agcaccctga cgtcgatagt 180
 cctcgataac tgtgtcatat gcaaattttc tactttctatg aaataaaca acagtcacac 240
 tcatttttgt cgctctttgt aaacgtataa ttactactgc atatgtaagc tttctctcca 300
 aaaaaaaaaa aaaaaaaaaa aa 322

<210> 581
 <211> 448
 <212> DNA
 <213> Pinus radiata

<400> 581
 aggatccaaa tgcgccaaag aaagccatga ctggatttat gttcttttct caagtgaaa 60
 gagagaatct gaaaaagagt gaccaggaa tggcatttac tgatgtggga agaaccattg 120
 gagaacgggt gaaaaaaatg tcagctgagg agaaagctcc ttaacgaatc aaagccaggg 180
 ctgataagga aaggtacaag gaagcaatgg ccgattacaa aagtggtcca acaaatgtgg 240
 actccgggaa tgaactctgt agtgaataga gcatcatact tacaagttca tattaacatg 300

gctagccgtg	taaagtaatt	gctttcattt	aaatgctttc	accctctggg	gcaatctttt	360
tacattcact	tgagaataatt	gttgggtgac	ttcacattag	caaaaagcaa	gcttacaact	420
gagtagtgtc	gagggatata	ctacatg				448

<210> 582
 <211> 321
 <212> DNA
 <213> *Pinus radiata*

<400> 582						
accttctttt	tggagtcac	atagattcct	cgtctttgat	tgcttcta	acagtatcaa	60
acatgaggag	tattggcagc	agtactgatg	cagtcattgca	atgttggtgt	tctaattatt	120
tgaatgcacc	tccttgtgct	tccggttcca	atatttcatt	gaatttcagac	atcagtgctt	180
ctgcattggt	agatgaagt	ggacttttac	caccgctga	aaatttggga	cagatgaatg	240
cacctacaag	aaccttcata	aagggtttata	agcaagggtc	agtcggggaga	tcgctagata	300
tctcacgctt	cagcagttat	c				321

<210> 583
 <211> 739
 <212> DNA
 <213> *Pinus radiata*

<400> 583						
ctgaattcta	tccggttggg	tattaaatta	aggtgattgt	tcgctacaga	cgttctgtgg	60
acaccgagtg	agtctctctag	ccttggaatt	tggcaccatc	tcgtcccga	gccatttcag	120
ttcgatctcc	cgccgttcaca	aaaaataatc	cccaattctc	cagctgtccc	tgccgtgtct	180
gcaecggaca	ggtctgccc	ggctttgggc	tggtggaatt	catgccaa	tatcacctat	240
aaactccacc	cgcattctgcc	cacaaacccc	acaagtacac	ccctctctcg	tcttctttga	300
aatctcagat	gggttctgcc	aattagctcg	gatccttgcc	tcttcaagtg	gttttggag	360
cacacacgag	gccaggagccc	gggtatcaac	gattccccctc	aactgacgta	accatggcg	420
accactcgcc	atcagcgcag	tcccgatagc	agcccgcgct	cggaggatga	atcaggagcg	480
cacacgtaca	gcaaccacaga	tggttccgtg	aagggaacagg	atcgatttct	gccctatgct	540
aattgtgagc	gaatcatgaa	gaaagccctt	ccagctaagt	ccaagatctc	gaaagatgcc	600
aaggagacgg	tgacggaatg	cgtttcagag	ttcatcagtt	tcacacagtg	ggaagcctct	660
gacaagtgtc	agaggggagaa	gaagaagacc	atcaatgggg	acgacctgct	gtgggcaatg	720
ggaactctag	ggtttgaaa					739

<210> 584
 <211> 413
 <212> DNA
 <213> *Pinus radiata*

<400> 584						
aaatctgact	atcgggatag	tgatgatgaa	ggaggaggta	ctgttcgaga	aggaaaggat	60
ctgcaaacct	caaatctcat	cgattatttt	ggcacaagta	atcacacaga	agaagcagaa	120
aatgagcatg	atgcattcag	ggatcaccaa	gggcccctgg	aatccagcaa	tgaagtccgc	180
catectacca	catacccaga	atcttcttca	ttgtcagcgc	aaggctctga	gcctcgagtt	240
tttctctgta	attactcgca	gagaaaattc	tacagctcgc	aggccttagg	aggccatcag	300
aatgctcaca	agcgagaaag	caccttggca	aagagggggc	aaagaattgg	ggcttttcaa	360
cacagggtaca	taagcatggc	atccctgcct	ctccatggct	ctacagaatc	agc	413

<210> 585
 <211> 622
 <212> DNA
 <213> *Pinus radiata*

<400> 585						
ggtctagggg	aaaagctttg	aaattatttg	gggttgagtt	tagagggtca	gaagggtgat	60
catttgaagg	gactaatggt	tctgatcagc	cacaagatgg	gactaatata	ttaactgcag	120
gtgaagcatc	cactgagcca	gtggaggaag	aactagtgtg	tgaggcccaa	aatggagatt	180
cagggaagt	agaagatgtg	ggtagtccag	tagaggctgg	agaaagtgg	agcactagca	240

attgctctggg	atcatctgct	caagaaaatc	ggaaaatatga	atgccaatac	tgttgccagag	300
agtttgcata	ttcgagcgtg	ctcgggggcc	atcaaaaatgc	gcacaaaaaa	gagagacagc	360
aggccaaaacg	cgcgcacctg	ctggccacca	ggagcgtctg	tgcgagtgcc	aacagaaagt	420
gcgcacatgc	atgggtcgccg	aacataaacg	gtaacctcta	ccatagaaat	ttctttttca	480
ataattctcta	cttcacacgc	atgcaggtgt	ttcaagaaga	tttcccgacc	tttcagaccc	540
cacagcgtgt	tgcagctcca	tcaatcccg	attatatctt	cagttaccag	cagcagcagc	600
aggcgcccg	gcagagtcg	tg				622

<210> 586

<211> 349

<212> DNA

<213> Pinus radiata

<400> 586

tgtaccggaa	aattccaaac	aaataatcaa	ccatggactc	atattgcccg	agatgggctc	60
agtggacagc	ggcgcggaag	gcacgagagc	aattttgtcc	gatgattgtg	tgaatttcga	120
atgcgcatat	tgtttgaggg	ttttcccgac	gtctcaggct	ctcgccggcc	accagaacgc	180
ccataaacga	gaacggcgcc	gggcaatgac	gaggtttcag	agatcgccct	ctgacagttc	240
aaactattca	ggaataacaga	atagtattga	tctgttttag	cgtgagagag	ttcccgggtc	300
ttctctcctt	tcaccacacg	gtacgagggg	tcattgtgtt	tgcagtgac		349

<210> 587

<211> 368

<212> DNA

<213> Pinus radiata

<400> 587

aaaaaggcgt	cagaatgggg	tgagctctgt	gtaagtacaa	gcgaaaaacg	taattgacttg	60
gatctctcta	cttattctga	aacctcttcc	cctgctcaag	gatctgatcc	tcgggttttc	120
ccctgtaatt	tctgtcaaa	caaattctac	agttctcaag	cattagggag	tcatacaaaa	180
gcccataaagc	gtgagagaa	tttggctaga	agggcacaga	gaatggggct	ttttgcacaa	240
agatattcaa	gcattggcat	acttccactc	cacggttctc	cggaaaaca	ttggacgcgc	300
agtgcgtttt	tagggataaa	agcacattct	tgtattcaca	aacctttccc	tgaagggtat	360
aacctgcc						368

<210> 588

<211> 516

<212> DNA

<213> Pinus radiata

<400> 588

ttcagatcta	taaatcaatg	tctgcattaa	tgacaaaacta	agttgaaatt	cccaaatgtt	60
gggtggttact	atttaggatt	ggacattagg	cgttgtgggtc	tcgggttcga	ttcacaaggc	120
atttctgttt	cggaatttca	aagcaacacg	tatcagaaaa	ctgattctat	actgtgtgat	180
cgcaggctac	taactacaca	gcaggtacca	tcagagacga	tcaagaggag	caatgtgtga	240
ggaggggacc	ttggactgtt	gatgaggaca	ttagccttat	tcatgcgta	accaccggg	300
gtgaaggtcg	attggaacaca	gtagccaaat	ttgcagggtc	aaagagaaca	ggaaagagct	360
gcagattgag	atgggttaat	tatcttcggc	ccgatgttaa	acgtggaac	ataacgcgg	420
aagagcagct	attaatcctt	gaactccacc	gtctctgggg	taacagatgg	tccaagattg	480
cacggcaact	ctcaggcagg	actgacaaag	aaatca			516

<210> 589

<211> 340

<212> DNA

<213> Pinus radiata

<400> 589

gagaactagt	ctcgagttag	ttatttgatt	catattgggt	gcagaggatt	ttcagagatt	60
gatgatgagt	gctgaagctg	ctatggagag	ggagagttgt	ttcatggatg	aaatgcgcag	120
gccgcagagg	aagaagaaga	ccgacgcaga	ggatgatttt	gacgagtggt	attatactca	180
tatgtgcaag	atttgcaaga	agaagttcgt	ctcagggcgg	gcttttggcg	gtcatatgag	240

aattcatggc cctgtggcca ctgcgcgcgc cgccgctgct gagagcaatg ggaaaaatct 300
 ggagcgcgag aggaagagat cccgtgctga agagattcga 340

<210> 590
 <211> 391
 <212> DNA
 <213> Pinus radiata

<400> 590
 gttgggtgta aagggtctga cgcgtttgag gagagcttga agcatttttg tagagtttgc 60
 aagaggagat ttgcttctgg gagggtctg ggtggtcata tgagagtaca tggagctgaa 120
 ttgggtgcaa ttaaggggtg tggtttggaa gagcagtttg agaaggggag ggtgaaggag 180
 cccagttaga gttgtgggtga ttctgtcaag gaaggagtg aggatgaggt agagggcttg 240
 aattctatgt acactttgag gaggaacccg aagcgaagct ggaggtttgc agatcaggat 300
 tactcttttg cctttggggg agtagatggg tctggggcta agagattttg gtctacattt 360
 ttgagggatt caagagtctg tgaggagtgt g 391

<210> 591
 <211> 260
 <212> DNA
 <213> Pinus radiata

<400> 591
 acgaaattac ctggtgggagt atactggaga gttgatttca catcggaag ctgataagcg 60
 aggaagagatt tatgatcgag aagactcttc ctctcttttc aacttgaacg atcagtatgt 120
 tcttgatgca taccggaagg gggataagtt gaaatttgca aatcattcac caactccaaa 180
 ttgctatgca aagggtgatta tggttgctgg tgatcataga gtgggtattt ttgcaaaagg 240
 acgcattgca gccggtgagg 260

<210> 592
 <211> 94
 <212> PRT
 <213> Eucalyptus grandis

<400> 592
 Met Gly Glu Arg Asp Asp Leu Gly Leu Ser Leu Ser Leu Ser Phe Pro
 1 5 10 15
 Gln Gly His Leu His Gln Gln Gln Gln Gln Gln Ser Leu
 20 25 30
 Gln Leu Asn Leu Met Pro Ser Leu Val Pro Ser Ser Ala Ser Ser Ala
 35 40 45
 Gln Ser Gly Phe Asn Leu Gln Lys Arg Ser Cys Asn Asp Ala Phe Pro
 50 55 60
 Ser Ser Ser Asp Arg Asn Ser Glu Ala Arg Ser Phe Leu Arg Gly Ile
 65 70 75 80
 Asp Val Asn Arg Glu Pro Ser Ala Gly Ala Ala Ala Asp Tyr
 85 90

<210> 593
 <211> 44
 <212> PRT
 <213> Eucalyptus grandis

<400> 593
 Asp Lys Ala Arg Leu Val Gln Glu Thr Gly Leu Gln Leu Lys Gln Ile
 1 5 10 15
 Asn Asn Trp Phe Ile Asn Gln Arg Lys Arg Asn Trp His Ser Asn Pro
 20 25 30
 Ser Thr Ser Thr Val Leu Lys Ser Lys Arg Lys Arg
 35 40

<210> 594
 <211> 291
 <212> PRT
 <213> Eucalyptus grandis

<400> 594
 Gly Glu Pro Leu Trp Ile Arg Ser Val Glu Thr Gly Arg Glu Ile Leu
 1 5 10 15
 Asn Tyr Asp Glu Tyr Val Lys Glu Phe Lys Val Glu Ala Pro Ser Glu
 20 25 30
 Gly Arg Pro Lys Arg Ser Ile Glu Ala Ser Arg Glu Thr Gly Val Val
 35 40 45
 Phe Val Asp Leu Pro Arg Leu Val Gln Ser Phe Met Asp Val Asn Gln
 50 55 60
 Trp Lys Glu Met Phe Pro Cys Met Ile Ser Lys Ala Ala Thr Val Asp
 65 70 75 80
 Val Val Cys Ser Gly Glu Gly Pro Asn Arg Asn Gly Ala Val Gln Leu
 85 90 95
 Met Phe Ala Glu Leu Gln Met Leu Thr Pro Met Val Pro Thr Arg Glu
 100 105 110
 Val Tyr Phe Ile Arg Tyr Cys Lys Gln Leu Ser Ala Glu Gln Trp Ala
 115 120 125
 Leu Val Asp Val Ser Ile Glu Lys Val Glu Asp Asn Ile Asp Ala Ser
 130 135 140
 Leu Val Lys Cys Arg Lys Arg Pro Ser Gly Cys Ile Ile Glu Asp Lys
 145 150 155 160
 Ser Asn Gly His Cys Lys Val Ile Trp Val Glu His Leu Glu Cys Gln
 165 170 175
 Lys Thr Thr Val His Pro Met Tyr Arg Thr Ile Val Asn Ser Gly Leu
 180 185 190
 Ala Phe Gly Ala Arg His Trp Met Thr Thr Leu Gln Val Gln Cys Glu
 195 200 205
 Arg Leu Val Phe Phe Met Ala Thr Asn Val Pro Thr Lys Asp Ser Asn
 210 215 220
 Gly Val Ala Thr Leu Ala Gly Arg Lys Ser Ile Leu Arg Leu Ala Gln
 225 230 235 240
 Arg Leu Thr Gln Ser Phe Cys Gln Ala Ile Gly Ala Ser Ser Tyr His
 245 250 255
 Ser Trp Thr Lys Val Pro Thr Lys Thr Gly Glu Asp Ile Arg Val Ala
 260 265 270
 Ser Arg Lys Asn Leu Asn Asp Pro Gly Glu Pro Leu Gly Val Ile Leu
 275 280 285
 Cys Ala Val
 290

<210> 595
 <211> 25
 <212> PRT
 <213> Eucalyptus grandis

<400> 595
 Met Gln Ala Val Met Thr Gly Cys Asp Ser Ser Asn Ile Ala Ala Leu
 1 5 10 15
 Pro Ser Gly Phe Ser Ile Leu Pro Asp
 20 25

<210> 596
 <211> 263
 <212> PRT
 <213> Eucalyptus grandis

<400> 596
 Gln Asn Gly Pro Ser Met Pro Pro Val Gln Pro Phe Val Arg Ala Glu
 1 5 10 15
 Met Leu Pro Ser Gly Tyr Leu Val Arg Pro Cys Glu Gly Gly Ser
 20 25 30
 Ile Ile Arg Ile Val Asp His Leu Asp Leu Glu Pro Trp Ser Val Pro
 35 40 45
 Glu Val Leu Arg Pro Leu Tyr Glu Ser Ser Thr Met Leu Ala Gln Lys
 50 55 60
 Thr Thr Met Ala Ala Leu Arg Gln Leu Arg Gln Ile Ala Gln Glu Val
 65 70 75
 Ser Gln Pro Asn Val Ser Gly Trp Gly Arg Arg Pro Ala Ala Leu Arg
 85 90 95
 Ala Leu Ser Gln Arg Leu Ser Arg Gly Phe Asn Glu Ala Leu Asn Gly
 100 105 110
 Phe Thr Asp Glu Gly Trp Ser Ile Met Gly Asn Asp Gly Ile Asp Asp
 115 120 125
 Val Thr Ile Leu Val Asn Ser Ser Pro Asp Lys Leu Met Gly Leu Asn
 130 135 140
 Leu Ser Phe Ser Asn Gly Phe Pro Ala Val Ser Asn Ala Val Leu Cys
 145 150 155
 Ala Arg Ala Ser Met Leu Leu Gln Asn Val Pro Pro Ala Val Leu Leu
 165 170 175
 Arg Phe Leu Arg Glu His Arg Ser Glu Trp Ala Asp Asn Ser Ile Asp
 180 185 190
 Ala Tyr Ser Ala Ala Ala Val Lys Val Gly Ser Cys Ala Leu Pro Gly
 195 200 205
 Ser Arg Ile Gly Ser Phe Gly Gly Gln Val Ile Leu Pro Leu Ala His
 210 215 220
 Thr Ile Glu His Glu Glu Phe Leu Glu Val Ile Lys Leu Glu Gly Met
 225 230 235
 Gly His Ser Pro Glu Asp Ala Leu Met Pro Arg Asp Ile Phe Phe Leu
 245 250 255
 Gln Met Cys Ser Gly Val Asp
 260

<210> 597

<211> 134

<212> PRT

<213> *Eucalyptus grandis*

<400> 597
 Cys Pro Ile Asp Ser Gly Arg Ser Phe Asp Thr Ser Leu Ser Leu Gly
 1 5 10 15
 Leu Gly Cys Tyr Gly Asp Pro Glu Asp His Glu Ile Lys Ile Lys Lys
 20 25 30
 Pro Leu Ala Lys Leu Ser Gly Asn Ser Thr Cys Leu Thr Ile Gly Leu
 35 40 45
 Pro Gly Gly Glu Ala Cys Gly Leu Gly Ser Ala Ser Gly Asp Glu Val
 50 55 60
 Arg Asn Ile Pro Ser Arg Ser Ala Ser Ser Phe Ser Asn Ser Ser Ser
 65 70 75 80
 Ala Lys Arg Glu Lys Ala Glu Gln Gly Glu Glu Ala Val Glu Arg
 85 90 95
 Gly Thr Gly Ser Pro Arg Ala Thr Ile Asn Ile Glu Asp Glu Asp Glu
 100 105 110
 Phe Ser Pro Arg Lys Lys Leu Arg Leu Ser Lys Ala Gln Ser Ser Ile
 115 120 125
 Leu Glu Glu Met Leu Gln
 130

<210> 598
 <211> 220
 <212> PRT
 <213> Eucalyptus grandis

<400> 598
 Met Gly Gln Gln Ser Leu Ile Tyr Ser Phe Val Ala Arg Gly Thr Val
 1 5 10 15
 Ile Leu Ala Asp Tyr Thr Glu Phe Thr Gly Asn Phe Thr Ser Val Ala
 20 25 30
 Phe Gln Cys Leu Gln Lys Leu Pro Ala Thr Asn Asn Lys Phe Thr Tyr
 35 40 45
 Ser Cys Asp Gly His Thr Phe Asn Phe Leu Val Asp Asp Gly Phe Thr
 50 55 60
 Tyr Cys Val Val Ala Val Glu Ser Val Gly Arg Gln Val Pro Ile Ala
 65 70 75 80
 Phe Leu Glu Arg Val Lys Asp Asp Phe Thr Lys Arg Tyr Gly Gly Gly
 85 90 95
 Lys Ala Ala Thr Ala Val Ala Lys Ser Leu Asn Lys Glu Phe Gly Ser
 100 105 110
 Lys Leu Lys Glu Gln Met Gln Tyr Cys Val Asp His Pro Glu Glu Ile
 115 120 125
 Ser Lys Leu Ala Lys Val Lys Ala Gln Val Ser Glu Val Lys Gly Val
 130 135 140
 Met Met Glu Asn Ile Glu Lys Val Leu Asp Arg Gly Glu Lys Ile Glu
 145 150 155 160
 Leu Leu Val Asp Lys Thr Glu Asn Leu Arg Ser Gln Ala Gln Asp Phe
 165 170 175
 Arg Gln Gln Gly Thr Gln Ile Arg Arg Lys Met Trp Leu Gln Asn Met
 180 185 190
 Lys Ile Lys Leu Ile Val Leu Gly Ile Leu Ile Ala Leu Ile Leu Ile
 195 200 205
 Ile Val Leu Ser Ile Cys Gly Asn Gly Lys Cys Lys
 210 215 220

<210> 599
 <211> 149
 <212> PRT
 <213> Eucalyptus grandis

<400> 599
 Glu Glu Lys Lys Glu Glu Pro Pro Ala Pro Ile Thr Val Val Leu Lys
 1 5 10 15
 Val Gly Met His Cys Glu Ala Cys Thr Arg Val Leu Arg Lys Arg Ile
 20 25 30
 Arg Lys Ile Lys Gly Val Glu Thr Val Glu Thr Asp Val Val Asn Asp
 35 40 45
 Arg Val Ile Val Lys Gly Val Val Asp Pro Pro Lys Leu Val Ala Tyr
 50 55 60
 Val Lys Lys Arg Thr Gly Lys Gln Ala Ser Ile Val Lys Glu Glu Glu
 65 70 75 80
 Lys Lys Glu Glu Glu Lys Lys Glu Glu Ala Lys Lys Glu Glu Ser Lys
 85 90 95
 Glu Gly Glu Lys Lys Asp Gly Glu Glu Gly Lys Asp Glu Asp Gly Ser
 100 105 110
 Lys Met Asp Ile Lys Lys Asn Glu Tyr Trp Pro Ser Arg Pro Tyr Met
 115 120 125
 Glu Tyr Gln Met Tyr Pro Thr Gln Ile Phe Ser Asp Glu Asn Pro Asn
 130 135 140
 Ala Cys Ser Val Met
 145

<210> 600
 <211> 107
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 600
 Met Glu Phe Pro Ser Glu Phe Ser Glu Ala Ser Ser Gln Lys Arg Ile
 1 5 10 15
 Gly Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn
 20 25 30
 Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 35 40 45
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe
 50 55 60
 Ser Ser Arg Gly Arg Leu Tyr Glu Tyr Ala Asn Asn Ser Val Arg Gly
 65 70 75 80
 Thr Ile Glu Arg Tyr Lys Lys Ala Ser Ser Asp Ser Ser His Pro Gln
 85 90 95
 Ser Val Ser Glu Val Asn Thr Gln Phe Tyr Pro
 100 105

<210> 601
 <211> 233
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 601
 Met Ala Arg Gly Lys Ile Gln Ile Lys Leu Ile Glu Asn Thr Thr Asn
 1 5 10 15
 Arg Gln Val Thr Tyr Ser Lys Arg Arg Asn Gly Leu Phe Lys Lys Ala
 20 25 30
 Asn Glu Leu Thr Val Leu Gly Asp Pro Lys Val Ser Ile Ile Met Ile
 35 40 45
 Ser Ser Thr Gly Lys Leu His Glu Tyr Ile Ser Pro Ser Thr Ser Thr
 50 55 60
 Lys Lys Met Tyr Asp Gln Tyr Gln Gln Ala Leu Glu Val Asp Leu Trp
 65 70 75 80
 Ser Ser His Tyr Glu Lys Met Gln Glu Asn Leu Arg Lys Leu Lys Glu
 85 90 95
 Val Asn Lys Lys Leu Gln Leu Glu Val Arg Arg Arg Phe Gly Glu Gly
 100 105 110
 Leu Asn Gly Met Ser Leu Ser Glu Leu Cys Gly Leu Glu Gln Asp Met
 115 120 125
 Asp Asn Ala Val Ser Leu Ile Arg Glu Arg Lys Tyr Lys Thr Leu Gly
 130 135 140
 Asn Gln Ile Asp Thr Ala Arg Lys Lys Lys Lys Asn Ala Glu Glu Ile
 145 150 155 160
 Asn Lys Ser Leu Leu Gln Asp Trp Thr Asn Leu Ile Lys His Leu Arg
 165 170 175
 Glu Asp Asp Pro His Phe Gly Met Val Asp Asn Gly Arg Asp Tyr Glu
 180 185 190
 Ala Val Ile Gly Tyr Thr Asp Ala Ala Ala Ala Arg Leu Tyr Thr
 195 200 205
 Leu Arg Leu Gln Pro Asp Gln Pro Asn Leu Thr Ser Gly Gly Gly Ser
 210 215 220
 Glu Ile Thr Thr Tyr Pro Leu Leu Glu
 225 230

<210> 602
 <211> 113

<212> PRT

<213> Eucalyptus grandis

<400> 602

```

Met Ser Gln Lys Gly Leu Ile Tyr Ser Phe Val Ala Lys Gly Thr Val
 1          5          10          15
Val Leu Ala Glu His Thr Gln Phe Ser Gly Asn Phe Ser Thr Ile Ala
 20          25          30
Val Gln Cys Leu Gln Lys Leu Pro Ser Asn Ser Ser Lys Tyr Thr Tyr
 35          40          45
Ser Cys Asp Gly His Thr Phe Asn Phe Leu Thr Asp Ser Gly Phe Val
 50          55          60
Phe Leu Val Val Ala Asp Glu Ser Val Gly Arg Ser Val Pro Phe Val
 65          70          75
Phe Leu Glu Arg Val Lys Asp Asp Phe Met Gln His Tyr Ser Ala Ser
 85          90          95
Ile Ala Ser Gly Asp Pro His Pro Leu Ala Asp Asp Asp Glu Asp Asp
100          105          110
Asp

```

<210> 603

<211> 111

<212> PRT

<213> Eucalyptus grandis

<400> 603

```

Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20          25          30
Tyr Glu Leu Ser Val Leu Cys Asp Val Glu Val Ala Leu Leu Ile Phe
 35          40          45
Ser Ser Arg Gly Lys Leu Tyr Glu Phe Gly Ser Ala Gly Pro Ser Gly
 50          55          60
Ile Asn Lys Thr Leu Glu Arg Tyr Gln Arg Asp Asn Phe Thr Pro Gln
 65          70          75
Asp Asn Val Ala Glu His Glu Thr Gln Gln Asn Trp Phe Gln Glu Ile
 85          90          95
Ser Lys Leu Lys Ala Lys Tyr Glu Leu Phe Asn Lys Leu Gln Lys
100          105          110

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<210> 604

<211> 65

<212> PRT

<213> Eucalyptus grandis

<400> 604

```

Leu Leu Gln Lys Ser Ser Gln Glu Glu Asp Lys Ala Arg Leu Val Gln
 1          5          10          15
Asp Thr Gly Leu Gln Leu Thr Gln Ile Asn Asn Trp Phe Ile Asn Gln
 20          25          30
Arg Lys Arg Asn Trp His Ser Asn Pro Ser Ser Ser Thr Val Pro Lys
 35          40          45
Ser Lys Arg Lys Arg Ser His Ala Gly Asp Pro Asp Lys Glu Arg Pro
 50          55          60
Met
65

```

<210> 605

<211> 60

<212> PRT

<213> Eucalyptus grandis

<400> 605

```

Cys Ile Glu Thr Lys Ala Arg Phe Gly Lys Ser Val Glu Ser Pro Ala
 1           5           10           15
Thr Asp Lys Trp Lys Val Trp Phe Gln Asn Arg Arg Ala Arg Thr Lys
                20           25           30
Leu Lys Gln Thr Ala Val Glu Cys Glu Met Leu Gln Lys Cys Cys Glu
                35           40           45
Thr Leu Lys Glu Ala His Ser Arg Leu Gln Lys Glu
                50           55           60

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<210> 606

<211> 188

<212> PRT

<213> Eucalyptus grandis

<400> 606

```

Met Ala Phe Ala Gly Thr Thr Gln Lys Cys Met Ala Cys Glu Lys Thr
 1           5           10           15
Val Tyr Leu Val Asp Lys Leu Thr Ala Asp Asn Arg Ile Tyr His Lys
                20           25           30
Ala Cys Phe Arg Cys His His Cys Lys Gly Thr Leu Lys Leu Gly Asn
                35           40           45
Tyr Asn Ser Phe Glu Gly Val Leu Tyr Cys Arg Pro His Phe Asp Gln
                50           55           60
Leu Phe Lys Arg Thr Gly Ser Leu Glu Lys Ser Phe Glu Gly Thr Pro
        65           70           75           80
Lys Ile Ala Lys Pro Glu Lys Pro Val Asp Gly Glu Arg Pro Ala Ala
                85           90           95
Thr Lys Ala Ser Ser Met Phe Gly Gly Thr Arg Asp Lys Cys Val Gly
                100           105           110
Cys Lys Ser Thr Val Tyr Pro Thr Glu Lys Val Thr Val Asn Gly Thr
                115           120           125
Pro Tyr His Lys Ser Cys Phe Lys Cys Thr His Gly Gly Cys Val Ile
                130           135           140
Ser Pro Ser Asn Tyr Val Ala His Glu Gly Lys Leu Tyr Cys Arg His
        145           150           155           160
His His Thr Gln Leu Ile Lys Glu Lys Gly Asn Leu Ser Gln Leu Glu
                165           170           175
Gly Asp His Glu Arg Glu Thr Met Ala Pro Glu Ser
                180           185

```

<210> 607

<211> 66

<212> PRT

<213> Eucalyptus grandis

<400> 607

```

Phe Gly Lys Ile Phe Glu Glu Ser Val Arg Lys Glu Leu Ser Pro Glu
 1           5           10           15
Phe Ala Lys Leu Met Gln Glu Gly Ser Ala Tyr Leu Pro Ser Gly Ile
                20           25           30
Cys Met Ser Thr Met Gly Arg His Val Ser Tyr Glu Gln Ala Ile Ala
                35           40           45
Trp Lys Val Leu Ser Ala Glu Glu Asn Thr Val His Cys Leu Ala Ser
                50           55           60
Leu Ser
        65

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<210> 608
 <211> 60
 <212> PRT
 <213> Bucalyptus grandis

<400> 608
 Asp Gly Asn Ile Glu Lys Val Leu Asp Arg Gly Glu Lys Ile Glu Leu
 1 5 10 15
 Leu Val Asp Lys Thr Val Asn Leu Arg Ser Gln Ala Gln Asp Phe Arg
 20 25 30
 Gln Gln Gly Pro Lys Met Arg Arg Lys Met Trp Leu Gln Asn Met Lys
 35 40 45
 Ile Glu Ala Asp Leu Val Leu Gly Ile Ile Ile Ala
 50 55 60

<210> 609
 <211> 133
 <212> PRT
 <213> Bucalyptus grandis

<400> 609
 Ala Gln Arg Glu Arg Glu Arg Glu Asn Gly Phe Ala Gly Thr Thr Gln
 1 5 10 15
 Lys Cys Met Ala Cys Glu Lys Thr Val Tyr Leu Val Asp Lys Leu Thr
 20 25 30
 Ala Asp Asn Ser Ile Tyr His Lys Ala Cys Phe Arg Cys His His Cys
 35 40 45
 Asn Gly Thr Leu Lys Leu Gly Asn Tyr Asn Ser Phe Glu Gly Val Leu
 50 55 60
 Tyr Cys Arg Pro His Phe Asp Gln Leu Phe Lys Arg Thr Gly Ser Leu
 65 70 75 80
 Glu Lys Ser Phe Glu Gly Thr Pro Lys Ile Ala Lys Pro Glu Lys Pro
 85 90 95
 Val Ala Gly Glu Arg Pro Ala Gly Pro Lys Pro Pro Val Cys Ser Gly
 100 105 110
 Asp Arg Glu Thr Gln Cys Val Asp Val Arg Ala Arg Phe Pro Thr Glu
 115 120 125
 Lys Val Thr Val Leu
 130

<210> 610
 <211> 162
 <212> PRT
 <213> Bucalyptus grandis

<400> 610
 Met Ala Lys Glu Lys Ile Lys Ile Lys Lys Ile Asp Asn Leu Thr Ala
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Gly Leu Ile Lys Lys Ala
 20 25 30
 Glu Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ser Leu Ile Val Phe
 35 40 45
 Ser Ala Thr Gly Lys Leu Tyr Asp Phe Ser Ser Ser Arg Gln Met Lys
 50 55 60
 Gly Glu Asp Leu Glu Gly Leu Asn Val Glu Glu Leu Asp Gln Leu Glu
 65 70 75 80
 Lys Lys Leu Glu Ala Gly Leu Ser Leu Val Ile Lys Asn Lys Glu Glu
 85 90 95
 Lys Thr Trp Asn Glu Ile Asn Lys Leu Gln Arg Lys Glu Ala Gln Leu
 100 105 110
 Ile Lys Gln Asn Lys Gln Leu Lys His Glu Met Lys Met Ile Leu His

[illegible]

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<210> 611
<211> 43
<212> PRT
<213> Eucalyptus grandis
```

Met	Met	Ala	Val	Thr	Ser	Ala	Cys	Lys	Asp	Lys	Met	Gly	Ile	Asp	Asn
1				5					10					15	
Gly	Lys	Tyr	Val	Arg	Tyr	Thr	Pro	Glu	Gln	Val	Glu	Ala	Leu	Glu	Arg
			20					25					30		
Leu	Tyr	His	Glu	Cys	Pro	Lys	Pro	Ser	Ser	Leu					
		35					40								

```
<210> 612
<211> 226
<212> PRT
<213> Eucalyptus grandis
```

[illegible]

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<210> 613
<211> 82
<212> PRT
```

<213> Eucalyptus grandis

<400> 613

```

Arg Asp His Trp Ser Ser Phe Ser Ala Pro Ile Asp Glu Met Phe Pro
1      5      10      15
Asp Asp Ala Pro Leu Leu Pro Ser Gly Phe Arg Ile Ile Pro Leu Asp
20      25      30
Ser Lys Ser Ser Asp Val Gln Asp Ser Leu Thr Thr Asn Arg Thr Leu
35      40      45
Asp Leu Thr Ser Ser Leu Glu Val Gly Pro Ala Ser Thr Asn Cys Val
50      55      60
Gly Asp Val Ala Pro Ser His Gly Ala Arg Ser Val Leu Thr Ile Ala
65      70      75      80
Phe Gln

```

<210> 614

<211> 234

<212> PRT

<213> Eucalyptus grandis

<400> 614

```

Leu Asp Leu Ala Ser Ser Leu Glu Ile Gly Pro Ala Gly Asn Arg Ser
1      5      10      15
Phe Asn Asp Ile Asn Ala Asn Ser Gly Cys Thr Arg Ser Val Met Thr
20      25      30
Ile Ala Phe Glu Phe Ala Phe Glu Ser His Met Gln Glu His Val Ala
35      40      45
Ser Met Ala Arg Gln Tyr Val Arg Ser Ile Ile Ser Ser Val Gln Arg
50      55      60
Val Ala Leu Ala Leu Ser Pro Ser Asn Leu Gly Ser His Ala Gly Leu
65      70      75      80
Arg Thr Pro Leu Gly Thr Pro Glu Ala Gln Thr Leu Ala Arg Trp Ile
85      90      95
Cys His Ser Tyr Arg Cys Tyr Leu Gly Val Asp Leu Leu Lys Ser Ser
100      105      110
Asn Glu Gly Ser Glu Leu Ile Leu Lys Asn Leu Trp His His Ser Asp
115      120      125
Ala Ile Met Cys Cys Ser Leu Lys Ala Leu Pro Val Phe Thr Phe Ala
130      135      140
Asn Gln Ala Gly Leu Asp Met Leu Glu Thr Thr Leu Val Ala Leu Gln
145      150      155      160
Asp Ile Thr Leu Glu Lys Ile Phe Asp Asp His Gly Arg Lys Thr Leu
165      170      175
Cys Ser Glu Phe Pro Gln Ile Met Gln Gln Gly Phe Ala Cys Leu Gln
180      185      190
Gly Gly Ile Cys Leu Ser Ser Met Gly Arg Pro Val Ser Tyr Glu Arg
195      200      205
Ala Val Ala Trp Lys Val Met Asn Glu Glu Glu Asn Ala His Cys Ile
210      215      220
Cys Phe Met Phe Ile Asn Trp Ser Phe Val
225      230

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<210> 615

<211> 100

<212> PRT

<213> Eucalyptus grandis

<400> 615

```

Met Ala Phe Ala Gly Thr Thr Gln Lys Cys Met Ala Cys Glu Lys Thr
1      5      10      15

```

```

Val Tyr Leu Val Asp Lys Leu Thr Ala Asp Asn Arg Ile Tyr His Lys
      20      25      30
Ala Cys Phe Arg Cys His His Cys Lys Gly Thr Leu Lys Leu Gly Asn
      35      40      45
Tyr Asn Ser Phe Glu Gly Val Leu Tyr Cys Arg Pro His Phe Asp Gln
      50      55      60
Leu Phe Lys Arg Thr Gly Ser Leu Glu Lys Ser Phe Glu Gly Asn Pro
      65      70      75      80
Gln Asp Leu Gln Ser Pro Glu Lys Pro Val Val Glu Arg Asp Leu Gln
      85      90      95
Arg Pro Lys Ala
      100

```

```

<210> 616
<211> 93
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 616
Met Ala Phe Lys Ser Pro Gly Gly Ile Thr Trp Leu Lys His Leu Leu
  1      5      10      15
Val Lys Asn Phe Tyr Leu Gly Glu His Leu Lys Cys Arg Asn Gly Leu
      20      25      30
Ile Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ile Asp Ile Ala
      35      40      45
Leu Ile Met Phe Ser Pro Ser Asp Arg Val Ser His Phe Ser Gly Lys
      50      55      60
Arg Arg Ile Glu Asp Val Leu Thr Arg Phe Ile Asn Leu Thr Asp Gln
      65      70      75      80
Glu Arg Asp Thr Pro Arg Cys Pro Gly Ser Ala His Thr
      85      90

```

```

<210> 617
<211> 41
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 617
Met Gly Arg Gly Arg Val Gln Leu Lys Arg Ile Glu Asn Lys Ile Asn
  1      5      10      15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
      20      25      30
Tyr Glu Leu Ser Leu Leu Cys Asp Ala
      35      40

```

```

<210> 618
<211> 62
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 618
Glu Ile Ser Val Leu Cys Asp Ala Asp Val Ala Leu Ile Val Phe Ser
  1      5      10      15
Thr Lys Gly Lys Leu Phe Glu Tyr Ala Thr Asp Cys Cys Met Glu Arg
      20      25      30
Ile Leu Glu Arg Tyr Glu Arg Tyr Ser Tyr Ala Glu Ser Gln Val Leu
      35      40      45
Thr Asn Asn Ala Glu Thr Asn Gly Asn Trp Thr Leu Glu His
      50      55      60

```

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<210> 619

```

<211> 86
 <212> PRT
 <213> Eucalyptus grandis

<400> 619
 Asp Ser Ser His Pro Gln Ser Val Ser Glu Val Asn Thr Gln Phe Tyr
 1 5 10 15
 Gln Gln Glu Ala Ser Lys Leu Arg Arg Gln Ile Arg Glu Ile Gln Val
 20 25 30
 Ser Asp Arg His Leu Leu Gly Glu Gly Ile Ser Asp Leu Ser Phe Lys
 35 40 45
 Asp Leu Lys Asn Leu Glu Ser Lys Leu Glu Lys Ser Ile Ser Arg Val
 50 55 60
 Arg Ser Lys Lys Asn Glu Met Leu Phe Ala Glu Ile Glu Tyr Met Gln
 65 70 75 80
 Met Arg Gly Leu Val Gln
 85

<210> 620
 <211> 99
 <212> PRT
 <213> Eucalyptus grandis

<400> 620
 Glu Asn Ser Arg Asn Glu Trp Asp Ile Leu Ser Asn Gly Gly Gln Val
 1 5 10 15
 Gln Glu Met Ala His Ile Ala Asn Gly Arg Asp Pro Gly Asn Ser Val
 20 25 30
 Ser Leu Leu Arg Val Asn Asn Ala Asn Ser Ser Gln Ser Asn Met Leu
 35 40 45
 Ile Leu Gln Glu Ser Cys Thr Asp Ser Val Gly Ala Tyr Val Ile Tyr
 50 55 60
 Ala Pro Val Asp Ile Val Ala Met Asn Val Val Leu Asn Gly Gly Asp
 65 70 75 80
 Pro Asp Tyr Val Ala Leu Leu Pro Ser Gly Phe Ala Ile Leu Pro Asp
 85 90 95
 Gly Pro Glu

<210> 621
 <211> 72
 <212> PRT
 <213> Eucalyptus grandis

<400> 621
 Thr Glu Gln Val His Phe Leu Glu Lys Asn Phe Glu Leu Glu Asn Lys
 1 5 10 15
 Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu Gln
 20 25 30
 Pro Arg Gln Val Ala Ile Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys
 35 40 45
 Thr Lys His Leu Glu Lys Glu Tyr Glu Asp Leu Gln Ala Ser Tyr Asn
 50 55 60
 Ser Leu Lys Ala Asp Cys Asp Gly
 65 70

<210> 622
 <211> 79
 <212> PRT
 <213> Eucalyptus grandis

<400> 622

```

Asn Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly Leu Leu Lys Lys
 1           5           10           15
Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile
           20           25           30
Phe Ser Thr Arg Gly Lys Leu Tyr Glu Phe Cys Ser Ser Pro Ser Met
           35           40           45
Leu Lys Thr Leu Asp Arg Tyr Gln Lys Cys Ser Tyr Gly Ser Val Glu
           50           55           60
Val Asn Lys Pro Ser Lys Glu Leu Glu Asn Ala Tyr Arg Glu Tyr
65           70           75

```

<210> 623

<211> 242

<212> PRT

<213> Eucalyptus grandis

<400> 623

```

Met Gly Arg Gly Arg Leu Gln Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1           5           10           15
Arg Gln Val Thr Phe Ser Lys Arg Arg Ala Gly Leu Leu Lys Lys Ala
           20           25           30
His Glu Ile Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
           35           40           45
Ser Ala Lys Gly Lys Leu Phe Glu Tyr Ser Thr Asp Ser Cys Met Glu
           50           55           60
Arg Ile Leu Glu Arg Tyr Glu Arg Tyr Ser Tyr Ser Glu His Gln Val
65           70           75           80
Leu Ala Ser Glu Thr Glu Ser Ile Gly Ser Trp Thr Leu Glu His Ala
           85           90           95
Lys Leu Lys Ala Arg Leu Glu Val Leu His Arg Asn Tyr Arg His Phe
           100          105          110
Met Gly Glu Asp Leu Asp Ser Leu Ser Leu Lys Asp Leu Gln Asn Leu
           115          120          125
Glu Gln Gln Leu Glu Ser Ala Leu Lys His Ile Arg Ser Arg Lys Asn
           130          135          140
Gln Leu Met His Glu Ser Ile Ser Val Leu Gln Lys Lys Asp Arg Ala
145           150           155           160
Leu Gln Glu Gln Asn Asn Leu Leu Thr Arg Lys Val Lys Glu Lys Glu
           165           170           175
Arg Ala Leu Ala Gln Gln Ala Gln Trp Glu Gln Gln Asp His Ala Leu
           180          185          190
Asp Ser Pro Val Val Leu Pro His Tyr Leu Pro Ser Leu Asp Ile Asn
           195          200          205
Gly Ser Tyr Gln Ala Arg His Asn Gly His Asp Gly Glu Asn Leu
210           215           220
Thr Gln Pro Arg Ala Gly Thr Leu Leu Pro Pro Trp Met Leu His Arg
225           230           235           240
Leu Asn

```

<210> 624

<211> 360

<212> PRT

<213> Eucalyptus grandis

<400> 624

```

Met Lys Arg Leu Gly Ser Ser Asp Ser Leu Gly Ala Leu Met Ser Ile
 1           5           10           15
Cys Pro Pro Ser Glu Glu Leu Gln His Ser Pro Arg Asn Gly Asn Pro
           20           25           30

```

```

Ile Tyr His Ser Arg Asp Leu Gln Ser Met Leu Glu Leu Gly Leu Asp
      35      40
Glu Glu Gly Cys Val Glu Asp Gln Ser Ala Gly Gly Gly Gly His Val
      50      55      60
Gly Gly Glu Lys Lys Arg Arg Leu Ser Ile Asp Gln Val Lys Ala Leu
65      70      75      80
Glu Lys Asn Phe Glu Val Glu Asn Lys Leu Glu Pro Glu Arg Lys Val
      85      90      95
Lys Leu Ala Gln Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Val Trp
      100      105      110
Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Leu Glu Arg Asp
      115      120      125
Tyr Gly Val Leu Lys Ser Ser Tyr Glu Ala Leu Lys Leu Ser Tyr Asp
      130      135      140
Ala Leu Lys His Asp Asn Glu Ala Leu His Lys Glu Ile Lys Glu Leu
145      150      155      160
Lys Ser Lys Leu Arg Glu Glu Asp Asp Asn Pro Glu Ser Asn Leu Ser
      165      170      175
Val Lys Glu Glu Val Ile Ile Pro Gly His Asp Val Ser Asp Lys Ile
      180      185      190
Arg Ala Ala Asp Asp Gly Asp Asp Asp Thr Lys Arg Ser Pro Pro Pro
      195      200      205
Pro Ile Thr Ala Pro Pro Arg Glu Leu Ser Phe Asn Asn Gly Gly Leu
      210      215      220
Lys Asp Gly Ser Ser Asp Ser Asp Ser Ser Ala Ile Val Asn Glu Glu
225      230      235      240
Asn Ala Ala Thr Ser Ser Ser Ser Pro Asn Pro Ala Val Gln Ser His
      245      250      255
Gly Gly Phe Leu Lys Phe Met Gly Ser Ser Ser Ser Ala Ser Pro
      260      265      270
Pro Pro Pro Pro Pro Ala Ser Phe Gly Gly Cys Phe Ser Phe Gln Phe
      275      280      285
Gln Arg Ala Tyr Gln Pro Gln Pro Gln Pro Pro His His His His
290      295      300      305
His Ser Pro Tyr Val Lys Met Glu Glu His Asn Phe Leu Gly Gly Glu
      310      315      320
Glu Asp Cys Asn Phe Phe Ser Gln Gln Gln Ala Pro Asn Pro Gln Trp
      325      330      335
Glu Arg Pro Gln Gln Gly Lys Arg Arg Lys Thr Asn Ser Pro Arg Gly
      340      345      350
Arg Gly Leu Gln Ile Arg Asp Arg
      355      360

```

<210> 625

<211> 75

<212> PRT

<213> Eucalyptus grandis

<400> 625

```

Met Gly Glu Glu Ser Phe Ile Tyr Ser Phe Val Ala Arg Gly Thr Met
1      5      10      15
Ile Leu Ala Glu Tyr Thr Glu Phe Thr Gly Asn Phe Pro Ala Ile Ala
      20      25      30
Ala Gln Cys Leu Gln Lys Leu Pro Ser Ser Asn Asn Lys Phe Thr Tyr
      35      40      45
Ser Cys Asp His His Thr Phe Asn Phe Leu Leu Glu Asp Gly Tyr Ala
50      55      60
Tyr Cys Val Val Ala Lys Glu Ser Val Gly Gln
65      70      75

```

<210> 626

<211> 53
 <212> PRT
 <213> Eucalyptus grandis

<400> 626
 Ile Pro Phe Ser Leu Phe Pro Pro Gln Ser Glu Gly Phe Phe Asn Pro
 1 5 10 15
 Met Asp Gly Asn Leu Ser Leu Gln Ile Gly Tyr Asn Pro Thr Cys Leu
 20 25 30
 Asp Glu Met Asn Ala Ser Val Ser Ser Gln Asn Val Ala Gly Phe Ile
 35 40 45
 Pro Gly Trp Met Leu
 50

<210> 627
 <211> 50
 <212> PRT
 <213> Eucalyptus grandis

<400> 627
 Ala Gly Gly Glu Pro Met Trp Ile Ala Gly Pro Asp Gly Ser Ser Ser
 1 5 10 15
 Val Leu Asn Glu Asp Glu Tyr Ile Arg Ala Phe Pro Arg Gly Ile Val
 20 25 30
 Thr Asn Pro Thr Gly Phe Lys Arg Glu Pro His Asp Lys Pro Gly Ser
 35 40 45
 Ser Ser
 50

<210> 628
 <211> 232
 <212> PRT
 <213> Eucalyptus grandis

<400> 628
 Leu Gly Thr Gln Ile Pro Ser Gly Ile His Met Pro Ser Ala Asn Leu
 1 5 10 15
 Ser Ser Ile Ser Phe Leu Gly Pro Ile Pro Met Val Ser Gly Asp Gly
 20 25 30
 Gly Gly Arg Thr Gly Ser Glu Arg Ser Arg Asn Ala Asp Cys Ala Pro
 35 40 45
 Ala Gly Phe Pro Gly Gly Asp Glu Asp Val Asn Lys Gly Gly Asp Ile
 50 55 60
 Pro Tyr Gly Met Ser Thr Ile Val Arg Val Ile Pro Asn Ser Arg Tyr
 65 70 75 80
 Leu Arg Val Ala Gln Gln Leu Leu Asp Glu Ile Val Asn Val Arg Lys
 85 90 95
 Ala Leu Lys Arg Ser Asp Asp Ala Asn Asp Gln Ser Arg His Glu Asn
 100 105 110
 Gln Arg Ser Pro Lys Asp Ala Asp Gly Gly Ser Lys Asn Glu Ala Ser
 115 120 125
 Ser Asn Pro Gln Glu Ser Ala Ser Asn Ser Ser Glu Leu Ser Ala Ala
 130 135 140
 Glu Lys Gln Asp Leu Gln Asn Lys Leu Thr Lys Leu Leu Ser Met Leu
 145 150 155 160
 Asp Glu Val Asp Lys Arg Tyr Lys Gln Tyr Tyr His Gln Met Gln Ile
 165 170 175
 Val Val Gln Ser Phe Asp Thr Ile Ala Gly Ser Gly Ala Ala Lys Pro
 180 185 190
 Tyr Thr Ala Leu Ala Leu Gln Arg Ile Ser Arg His Phe Arg Cys Leu
 195 200 205

His Asp Ala Ile Thr Gly Gln Ile Gln Ala Thr Arg Lys Ser Leu Gly
 210 215 220
 Glu Gln Asp Thr Ser Thr Glu Thr
 225 230

<210> 629
 <211> 69
 <212> PRT
 <213> Eucalyptus grandis

<400> 629
 Leu Asp Ile Leu Glu Trp Ile Leu Glu Leu Ile Gly Val Thr Tyr Arg
 1 5 10 15
 Arg Leu Asp Gly Ser Thr Gln Val Thr Asp Arg Gln Ser Ile Val Asp
 20 25 30
 Thr Phe Asn Asn Asp Thr Ser Ile Phe Ala Cys Leu Leu Ser Thr Arg
 35 40 45
 Ala Gly Gly Gln Gly Leu Asn Leu Thr Gly Ala Asp Thr Val Val Ile
 50 55 60
 His Asp Met Gly Phe
 65

<210> 630
 <211> 62
 <212> PRT
 <213> Eucalyptus grandis

<400> 630
 Cys Trp His His Val His Thr Gln Cys Gly Lys Ala Gly Phe Gly Met
 1 5 10 15
 Leu Lys Gln Glu Asn Leu Ser Asn Glu Leu Asp Arg Val Lys Lys Glu
 20 25 30
 Asn Asp Asn Leu Gln Ile Gln Leu Arg His Leu Arg Gly Arg His Asn
 35 40 45
 Ile Thr Glu Pro Gln Arg Ala Asp Asn Pro Arg Arg His Ser
 50 55 60

<210> 631
 <211> 113
 <212> PRT
 <213> Eucalyptus grandis

<400> 631
 Gly Ser Lys Glu Leu Glu Ser Leu Glu Arg Gln Leu Asp Gly Ser Leu
 1 5 10 15
 Lys Gln Ile Arg Ser Arg Arg Thr Tyr Met Leu Asp Gln Leu Thr
 20 25 30
 Asp Leu Gln His Arg Glu Gln Leu Leu His Glu Ala Asn Arg Thr Leu
 35 40 45
 Asn Gln Arg Leu Met Glu Gly Tyr Gln Val Asn Ala Leu Gln Leu Asn
 50 55 60
 Gln His Ala Glu Glu Val Gly Gly Tyr Gly His Pro Pro Pro Pro
 65 70 75 80
 Leu Pro Pro Gln Pro Leu Ala Gln Pro His Ser Glu Ala Phe Phe Ile
 85 90 95
 Pro Trp Asn Val Asn Pro Leu Cys Lys Trp Asp Thr Ser Pro Ile Gln
 100 105 110
 Cys

<210> 632

<211> 393
 <212> PRT
 <213> Eucalyptus grandis

<400> 632
 Met Val Glu Gly Glu Arg Asn Gly Asp Asp Asp Gly Ala Ser Gln Gly
 1 5 10 15
 Glu Gln Gln Trp Lys His Gln Gln Ala Leu Asp Arg Leu Gly Lys Tyr
 20 25 30
 Val Arg Tyr Thr Ala Glu Gln Val Glu Ala Leu Glu Arg Val Tyr Ser
 35 40 45
 Glu Cys Pro Lys Pro Ser Ser Leu Arg Arg Gln Gln Leu Ile Arg Glu
 50 55 60
 Cys Pro Ile Leu Ser Asn Ile Glu Pro Lys Gln Ile Lys Val Trp Phe
 65 70 75 80
 Gln Asn Arg Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser Arg Leu
 85 90 95
 Gln Thr Val Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu Met Glu
 100 105 110
 Glu Asn Asp Arg Leu Gln Lys Gln Val Ser Gln Leu Val Cys Glu Asn
 115 120 125
 Gly Tyr Met Arg Gln Gln Leu His Thr Thr Ser Ala Thr Thr Thr Asp
 130 135 140
 Ala Ser Cys Asp Ser Val Val Thr Thr Pro Gln His Ser Leu Arg Asp
 145 150 155 160
 Ala Asn Asn Pro Ala Gly Leu Leu Ser Ile Ala Glu Glu Thr Leu Ala
 165 170 175
 Glu Phe Leu Ser Lys Ala Thr Gly Thr Ala Val Asp Trp Val Gln Met
 180 185 190
 Pro Gly Met Lys Pro Gly Pro Asp Ser Val Gly Ile Phe Ala Ile Ser
 195 200 205
 Gln Ser Cys Ser Gly Val Ala Ala Arg Ala Cys Gly Leu Val Ser Leu
 210 215 220
 Glu Pro Thr Lys Ile Val Glu Ile Leu Lys Asp Arg Thr Ser Trp Phe
 225 230 235 240
 Arg Asp Cys Arg Ser Leu Glu Val Phe Thr Met Phe Pro Ala Gly Asn
 245 250 255
 Gly Gly Thr Ile Glu Leu Val Tyr Thr Gln Ile Tyr Ala Pro Thr Thr
 260 265 270
 Leu Ala Pro Ala Arg Asp Leu Trp Thr Leu Arg Tyr Thr Thr Thr Leu
 275 280 285
 Glu Asn Gly Ser Leu Val Val Cys Glu Arg Ser Leu Ser Gly Ser Gly
 290 295 300
 Ala Gly Pro Asn Pro Ala Ser Ala Ala Gln Phe Val Arg Ala Glu Ile
 305 310 315 320
 Leu Pro Ser Gly Tyr Leu Ile Arg Pro Cys Glu Gly Gly Gly Ser Ile
 325 330 335
 Ile His Ile Val Asp His Leu Asn Leu Glu Ala Trp Ser Val Pro Glu
 340 345 350
 Val Leu Arg Pro Leu Tyr Glu Ser Ser Lys Val Val Ala Gln Arg Ile
 355 360 365
 Thr Ile Ala Ala Leu Arg Tyr Ile Arg Gln Ile Ala Gln Glu Thr Ser
 370 375 380
 Gly Glu Val Val Tyr Gly Leu Gly Arg
 385 390

<210> 633
 <211> 64
 <212> PRT
 <213> Eucalyptus grandis

<400> 633

```

Met Gly Ile Asp Asp Leu Cys Asn Thr Gly Leu Val Leu Ser Leu Gly
 1           5           10           15
Leu Glu Thr Pro Phe Lys Ile Glu Ala Gln Arg Gln Ala Lys Gln Arg
 20           25           30
Leu Asn Phe Glu Pro Ser Leu Thr Leu Cys Leu Ser Gly Thr Thr Lys
 35           40           45
Ala Thr Arg Asp Glu Gln Pro Pro Ala Asp His Leu Tyr Arg Gln Ala
 50           55           60
Ser Pro His Ser His Asn Ser Leu Ser Ala Val Ser Ser Phe Ser Ser
 65           70           75           80
Pro Arg Val Lys

```

<210> 634

<211> 67

<212> PRT

<213> *Eucalyptus grandis*

<400> 634

```

Glu Ser Gly Glu Ala Arg Arg Leu Arg Asp Ser Leu Val Glu Met Ala
 1           5           10           15
Asn Val Gly Lys Ser Pro Ser Met Leu Thr Glu Cys Gly Leu Ala Glu
 20           25           30
Asn Ser Leu Val Ser Ile Ala Glu Arg Val Thr His His Arg Trp Ser
 35           40           45
Trp Ser Glu Val Lys Tyr Leu Ser Asp Cys His Leu Met Ala Leu Asp
 50           55           60
Ala Ser Leu
 65

```

<210> 635

<211> 103

<212> PRT

<213> *Eucalyptus grandis*

<400> 635

```

Tyr Ser Glu Ala Ser Ser Asp Glu Gly Asn Gln Tyr Ser Thr Arg Glu
 1           5           10           15
Glu Glu Gly Glu Ile Glu Glu Phe Glu Glu Asp Thr Tyr Ser Gly Ala
 20           25           30
Pro Gly Ala Leu Pro Ile Asn Lys Asp Gln Ser Asp Glu Asp Val Pro
 35           40           45
Ala Glu Glu Cys Asp Glu Tyr Pro Trp Thr Ser Glu Arg Thr Arg Asn
 50           55           60
Asn His Leu Pro Glu Glu Ala Gly Phe Ser Gly Ser Ser Ala Asp Ser
 65           70           75           80
Pro Arg Gly Ile Arg Met Ala Ser Pro Ser Ala Ser Ser Gln Lys Phe
 85           90           95
Gly Ser Leu Ser Ala Leu Asp
 100

```

<210> 636

<211> 299

<212> PRT

<213> *Eucalyptus grandis*

<400> 636

```

Met Ala Phe His Asn His Leu Ser His Gln Asp Leu Ser Ser Leu His
 1           5           10           15
His Phe Ala Ala Asp Gln Gln Pro Pro Pro Gln His Gln Gln Gln

```

20 25 30
 Gln Gln His Leu Pro Asp Ser Ser Ser Val His His Gln Leu His
 35 40 45
 His Ala Ala Gly Pro Asn Trp Leu Asn Thr Ala Leu Leu Arg Ser Asp
 50 55 60
 Ala Ala Ala Ala Ala Ala Ala Gly Gly Asn Ser Phe Leu Asn
 65 70 75
 Leu His Thr Ser Ser Asp Ser Ala Ala Ser Pro Gln Ala Gln Gln Gln
 85 90 95
 Pro Pro Ala Thr Ser Ala Ser Ala Ala Gly His His Gln Trp Leu
 100 105 110
 Ser Arg Gln His Ser Ser Leu Leu Gln Arg Asn His Ser Glu Val Ile
 115 120 125
 Asp Ala Asp Ser Ile Ile Asp Ser Ala Asp Leu Lys Glu Ser Val Ser
 130 135 140
 Lys Gly Asp Gly Gly Gly Gly Ala Ala Glu Ser Asn Trp Glu Asn
 145 150 155 160
 Ala Lys Tyr Lys Ala Glu Ile Leu Ala His Pro Leu Tyr Glu Gln Leu
 165 170 175
 Leu Ser Ala His Val Ala Cys Leu Arg Ile Ala Thr Pro Val Asp Gln
 180 185 190
 Leu Pro Arg Ile Asp Ala Gln Leu Ala Gln Ser Gln His Val Val Ala
 195 200 205
 Lys Tyr Ser Ala Met Ser Gln Gly Leu Val Ala Asp Asp Lys Glu Leu
 210 215 220
 Asp Gln Phe Met Thr His Tyr Val Leu Leu Leu Cys Ser Phe Lys Glu
 225 230 235 240
 Gln Leu Gln Gln His Val Arg Val His Ala Met Glu Ala Val Met Ala
 245 250 255
 Cys Trp Glu Ile Glu Gln Ser Leu Gln Ser Leu Thr Gly Val Ser Pro
 260 265 270
 Gly Glu Gly Thr Gly Ala Thr Met Ser Asp Asp Glu Asp Asp Gln Val
 275 280 285
 Asp Ser Asp Ala Asn Leu Phe Asp Gly Ser Leu
 290 295

<210> 637
 <211> 91
 <212> PRT
 <213> Eucalyptus grandis

<400> 637
 Met Gly Arg Arg Lys Ile Glu Ile Gln Pro Ile Thr His Glu Arg Asn
 1 5 10 15
 Arg Ser Val Thr Phe Leu Lys Arg Lys Asn Gly Leu Phe Lys Lys Ala
 20 25 30
 Tyr Glu Leu Gly Val Leu Cys Ser Val Asp Val Ala Val Ile Ile Phe
 35 40 45
 Glu Asp Arg Pro Gly His Ser Pro Lys Leu Tyr Gln Tyr Ser Ser Arg
 50 55 60
 Gly Ile Gln Asp Ile Val Gln Arg His Leu His His Asp Gly Glu Thr
 65 70 75 80
 Asp Asn Arg Gly Pro Gly Asp Phe Ser Gly Ala
 85 90

<210> 638
 <211> 129
 <212> PRT
 <213> Eucalyptus grandis

<400> 638

```

Met Phe Ser Thr Gly Glu Tyr Ser Ala Ala Phe Glu Gly Met Asp
 1      5      10      15
Ser Leu Pro Ser Pro Arg Lys Lys Lys Asn Gln Leu Val Asn Arg Arg
 20      25      30
Arg Phe Ser Asp Glu Gln Ile Arg Ser Leu Glu Ser Ile Phe Glu Ser
 35      40      45
Glu Ser Arg Leu Glu Pro Arg Lys Lys Leu Gln Leu Ala Arg Glu Leu
 50      55      60
Gly Leu Gln Pro Arg Gln Val Ala Ile Trp Phe Gln Asn Lys Arg Ala
 65      70      75      80
Arg Trp Lys Ser Lys Gln Leu Glu Arg Asp Phe Ala Ile Leu Arg Ala
 85      90      95
Asn Tyr Asn Ala Leu Tyr Ser Arg Phe Glu Ser Leu Lys Lys Glu Lys
100      105      110
Gln Ser Leu Val Thr Gln Ile Glu Lys Leu Asn Gln Leu Val Glu Lys
115      120      125
Pro

```

```

<210> 639
<211> 101
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 639
Met Leu Tyr Arg Gly Gly Met Arg Thr Pro Asn Ala Gln Gln Ile Glu
 1      5      10      15
Gln Ile Thr Ala Gln Leu Ser Lys Tyr Gly Lys Ile Glu Gly Lys Asn
 20      25      30
Val Phe Tyr Trp Phe Gln Asn His Lys Ala Arg Glu Arg Gln Lys Gln
 35      40      45
Lys Arg Asn Ser Leu Gly Leu Ser His Cys Ser Arg Thr Pro Thr Thr
 50      55      60
Ala Ala Thr Ile Ala Thr Val Thr Leu Asn Thr Thr Lys Val His Arg
 65      70      75      80
Thr Ile Leu Pro Tyr Phe Phe Pro His Ser Gly Ile Gly Val Arg Ala
 85      90      95
Leu His Asp Ala Cys
100

```

```

<210> 640
<211> 85
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 640
Thr Pro Ser Ser Pro Ala Ser Asp Gln Ile Leu Ser Ser Cys Thr Pro
 1      5      10      15
Gln Asp Phe His Gly Val Ala Ser Leu Gly Lys Arg Ser Met Ser
 20      25      30
Phe Thr Gly Ile Asp Val Gly Asp Asp Pro Asn Ile Asn Asn Gly Asn
 35      40      45
Val Asn Gly Glu Glu Asp Leu Ser Glu Asp Asp Gly Ser Gln Pro Gly
 50      55      60
Gly Glu Lys Lys Arg Arg Leu Asn Met Glu Gln Val Lys Thr Leu Glu
 65      70      75      80
Lys Asn Phe Glu Leu
 85

```

```

<210> 641
<211> 162

```

<212> PRT

<213> Eucalyptus grandis

<400> 641

```

Gly Lys Ala Thr Ala Ser Gly Gly Gly Gly Gly Tyr Met Ser Ser Pro
 1      5      10      15
Val Pro Leu Gly Pro Phe Thr Gly Tyr Ala Ser Ile Leu Lys Gly Ser
 20      25      30
Arg Phe Leu Arg Pro Ala Gln Gln Leu Leu Glu Glu Leu Cys Glu Ala
 35      40      45
Gly Arg Ala Ile Cys Thr Glu Lys Met Thr Asp Asp Ser Cys Ala Met
 50      55      60
Thr Glu Pro Ala Met Asp Ser Leu Ser Gly Gly Cys Gly Ile Gly Met
 65      70      75      80
Asp Asp Gly Cys Gly Gly Asp Gly Gly Glu Phe Arg Arg Lys Lys Ser
 85      90      95
Arg Leu Ile Ser Met Leu Asp Glu Val Cys Arg Arg Tyr Lys Gln Tyr
100      105      110
Cys Gln Gln Met Gln Ala Val Val Ala Ser Phe Glu Cys Val Ala Gly
115      120      125
Leu Ser Asn Ala Ala Pro Tyr Ala Asn Leu Ala Leu Lys Ala Met Ser
130      135      140
Lys His Phe Lys Cys Leu Lys Asn Ala Ile Ala Asp Gln Leu Gln Phe
145      150      155      160
Thr Asn

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<210> 642

<211> 155

<212> PRT

<213> Eucalyptus grandis

<400> 642

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Met Gly Gln Gln Ser Leu Ile Tyr Ser Phe Val Ala Arg Gly Thr Val
 1      5      10      15
Ile Leu Ala Glu Tyr Thr Glu Phe Thr Gly Asn Phe Thr Ser Ile Ala
 20      25      30
Ser Gln Cys Leu Gln Lys Leu Pro Ala Thr Asn Asn Lys Phe Thr Tyr
 35      40      45
Asn Cys Asp Gly His Thr Phe Asn Tyr Leu Val Glu Asn Gly Phe Thr
 50      55      60
Tyr Cys Val Val Ala Ala Glu Ser Ala Gly Arg Gln Ile Pro Ile Ala
 65      70      75      80
Phe Leu Glu Arg Ile Lys Asp Asp Phe Asn Lys Arg Tyr Gly Gly Gly
 85      90      95
Lys Ala Thr Thr Ala Ala Ala Asn Ser Leu Asn Arg Glu Phe Gly Pro
100      105      110
Lys Leu Lys Glu His Met Gln Tyr Cys Val Asp His Pro Glu Glu Ile
115      120      125
Ser Lys Leu Ala Lys Val Lys Ala Gln Val Ser Glu Val Lys Gly Val
130      135      140
Met Met Glu Asn Ile Glu Lys Val Leu Asp Arg
145      150      155

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<210> 643

<211> 54

<212> PRT

<213> Eucalyptus grandis

<400> 643

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Glu Trp Trp Ser Val His Asn Lys Trp Pro Tyr Pro Thr Glu Ala Asp

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1 5 10 15
 Lys Ile Ala Leu Ala Lys Ser Thr Gly Leu Asp Gln Lys Gln Ile Asn
 20 25 30
 Asn Trp Phe Ile Asn Gln Arg Lys Arg His Trp Lys Pro Ser Glu Ile
 35 40 45
 Thr His Tyr Lys Val Ile
 50

<210> 644
 <211> 308
 <212> PRT
 <213> Eucalyptus grandis

<400> 644
 Met Ala Met Gln Thr Gly Ile Gly Leu Ser Lys Ile Leu Val Leu Ala
 1 5 10 15
 Gly Ala Gly Tyr Thr Gly Thr Ile Leu Phe Gln Asn Gly Lys Leu Ser
 20 25 30
 Asp Leu Leu Gly Glu Leu Gln Gly Leu Val Lys Gly Leu Glu Lys Ser
 35 40 45
 Gly Ser Gln Ser Asp Gly Asp Lys Asp Tyr Ser Asp Ala Val Ala Ala
 50 55 60
 Gln Val Arg Arg Leu Ala Met Glu Val Arg Gln Leu Ala Ser Ala Arg
 65 70 75 80
 Gln Ile Thr Val Leu Asn Gly Asn Ser Ser Gln Met Gly Asn Leu Thr
 85 90 95
 Asn Met Val Val Pro Ala Ala Thr Leu Gly Ala Leu Gly Tyr Gly Tyr
 100 105 110
 Met Trp Trp Lys Gly Leu Ser Phe Ser Asp Leu Met Tyr Val Thr Lys
 115 120 125
 Arg Gly Met Ala Asn Cys Val Ala Asn Leu Thr Gln His Leu Glu His
 130 135 140
 Val Ser Glu Ala Leu Asn Ser Val Lys Lys His Leu Thr Gln Arg Ile
 145 150 155 160
 Glu Asn Leu Asp Gly Lys Met Asp Asp Gln Arg Glu Leu Ser Lys Glu
 165 170 175
 Ile Lys Asn Glu Val Ser Ser Val Lys Ala Asn Leu Asp Gly Leu Gly
 180 185 190
 Asp Asp Leu Asp Phe Leu Gln Arg Met Val Ser Gly Leu Asp Val Arg
 195 200 205
 Met Gly Ser Leu Glu Tyr Lys Gln Asp Trp Ala Asn Glu Gly Val Arg
 210 215 220
 Tyr Leu Cys Gly Val Ala Ser Gly Gln Lys Val Glu Met Pro Lys Met
 225 230 235 240
 Leu Gln Glu Gln Ile Lys Ile Ser Gly Thr Ser Arg Gly Leu Leu Ser
 245 250 255
 Tyr Gln Asp Thr Pro Ser Leu Lys Gly Leu Lys Glu Ile Ala Asp Ala
 260 265 270
 Leu Thr Leu Ser Ile Asp Arg Ser Ala Ser Asp Ala Val Val Gln Asp
 275 280 285
 Gly Val Glu Arg Leu Asn Gly Lys Pro Lys Pro Leu Pro Arg Ala Ser
 290 295 300
 Ser Thr Thr Cys
 305

<210> 645
 <211> 197
 <212> PRT
 <213> Eucalyptus grandis

<400> 645

Met Glu Glu Tyr Gly Gln Met Asn Glu Asn Ser Ser Thr Gly Ser Arg
 1 5 10 15
 Gly Asn Asn Ser Phe Leu Tyr Ala Ser Pro Val Leu Gly Pro Ser Ser
 20 25 30
 Ser Gly Asn Ser Asn Tyr Gly Arg Gly Asn Ser Ser Gly Gly His Phe
 35 40 45
 Tyr Ser Gln Ser Gly Asp His Cys Phe Gln Ser Glu Ala Pro Pro His
 50 55 60
 Pro Val Val Lys Thr Glu Ala Thr Thr Ser His His Gly His Ala Gln
 65 70 75 80
 Lys Phe His His Tyr Ser Leu Val Arg Asp His His Asp Pro Ser Ala
 85 90 95
 Ser His His His His Gln His His Gln His Gln Gln Leu Gln Thr
 100 105 110
 Ala Ser Glu Ser Ser Arg Glu Val Asp Ala Met Lys Ala Lys Ile Ile
 115 120 125
 Ala His Pro Gln Tyr Ser Asn Leu Leu Glu Ala Tyr Met Asp Cys Gln
 130 135 140
 Lys Val Gly Ala Pro Pro Glu Val Val Ala Lys Leu Ser Val Ala Arg
 145 150 155 160
 Gln Glu Phe Glu Ser Arg Gln Arg Ser Ser Val Ala Ser Ala Asp Gly
 165 170 175
 Ser Lys Asp Pro Glu Leu Asp Gln Phe Met Glu Ala Tyr Tyr Asp Met
 180 185 190
 Leu Val Lys Tyr Arg
 195

<210> 646
 <211> 304
 <212> PRT
 <213> Eucalyptus grandis

<400> 646
 Glu Glu Gly Glu Asp Glu Gln Val Leu Gln Pro Lys Ile Lys Arg Lys
 1 5 10 15
 Arg Ser Leu Arg Val Arg Pro Arg His Thr Met Glu Arg Pro Glu Glu
 20 25 30
 Lys Ser Ser Asn Gly Ala Leu Pro Val Gln Cys Gly Asp Ser Ala Phe
 35 40 45
 Leu Pro Leu Gln Met Asp His Lys Tyr Gln Pro Gln Ser Arg Thr Ala
 50 55 60
 Ser Glu Thr Asn Pro Phe Gly Glu Pro Thr Ala Ser Lys His Gly His
 65 70 75 80
 Gly Gly Pro Ser Met Lys Ser Lys Arg Gln Thr Ser Leu Arg Arg Ile
 85 90 95
 Asn Asp Pro Ser Lys Leu His Pro Leu Pro Lys Ser Ser Arg Ser Asn
 100 105 110
 His Ile Ser Ser Ser Asp Ala Ala Ala Glu Arg Ser Arg Glu Asn Trp
 115 120 125
 Asn Gly Arg Val Ala Asn Pro Ser Gly Asn Ser Ser Val Gly Ala Gly
 130 135 140
 Leu Ser Glu Ile Ile Gln Arg Lys Cys Lys Asn Val Val Ser Lys Leu
 145 150 155 160
 Gln Arg Arg Ile Asp Lys Glu Gly His His Ile Val Pro Leu Leu Thr
 165 170 175
 Asp Leu Trp Lys Arg Met Gly Ser Pro Gly His Met Gly Gly Val Gly
 180 185 190
 Ser Asn Leu Leu Asp Leu Arg Lys Ile Asp Gln Arg Ile Glu Lys Leu
 195 200 205
 Glu Tyr Gly Asp Val Met Asp Leu Val Leu Asp Val Gln Leu Met Leu
 210 215 220

Lys Gly Ala Met Gln Phe Tyr Gly Phe Ser His Glu Val Arg Ser Glu
 225 230 240
 Ala Arg Lys Val His Asp Leu Phe Phe Asp Ile Leu Lys Ile Ala Phe
 245 250 255
 Pro Asp Thr Asp Phe Glu Glu Val Arg Asn Ala Leu Ser Phe Ser Gly
 260 265 270
 Pro Gly Ala Ala Ser Gln Ser Ala Pro Ser Pro Lys Gln Ala Ser Ala
 275 280 285
 Gly Gln Ser Lys Arg His Arg Ala Leu Asn Glu Val Asp Ala Asp Lys
 290 295 300

<210> 647
 <211> 166
 <212> PRT
 <213> Eucalyptus grandis

<400> 647
 Val Val Gly Lys Ala Leu Gln Lys Cys Ala Lys Ile Ser Thr Asp Leu
 1 5 10 15
 Lys Lys Ala Leu Tyr Gly Ser Ser Val Ala Ser Cys Glu His Tyr Ser
 20 25 30
 Glu Val Glu Ala Ser Ser Asn Arg Ile Val Thr Gln Asp Asp Val Asp
 35 40 45
 Ala Ala Cys Gly Ala Asp Thr Asp Phe Gln Pro Val Leu Lys Pro
 50 55 60
 Tyr Gln Leu Val Gly Val Asn Phe Leu Leu Leu Leu His Arg Lys Gly
 65 70 75 80
 Val Gly Gly Glu Gly Gln Gly Val Leu Lys Tyr Asp Thr Ser Leu Ala
 85 90 95
 Asn Gly Ala Ser Leu Tyr Ser Met Gln Ala Ile Leu Ala Asp Glu Met
 100 105 110
 Gly Leu Gly Lys Thr Ile Gln Ala Ile Thr Tyr Leu Thr Leu Leu Lys
 115 120 125
 His Leu Asn Asn Asp Pro Gly Pro His Leu Val Val Cys Pro Ala Ser
 130 135 140
 Leu Leu Glu Asn Trp Glu Arg Glu Leu Lys Arg Trp Cys Pro Ser Phe
 145 150 155 160
 Ser Val Leu Gln Tyr His
 165

<210> 648
 <211> 142
 <212> PRT
 <213> Eucalyptus grandis

<400> 648
 Met Phe Met Val Asp Asp His Ala Leu Cys Leu Ser Cys Asn Cys Thr
 1 5 10 15
 Phe Asn Ile Leu Ala Cys Cys Asn Cys Ser Tyr Pro Lys Asp Ser Asp
 20 25 30
 Lys His Met Leu Ala Lys Gln Ala Gly Leu Thr Arg Ser Gln Val Ser
 35 40 45
 Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp Lys Pro Met Val Glu
 50 55 60
 Glu Met Tyr Leu Glu Glu Thr Lys Ser Arg Glu Gln Ala Gly Ser Glu
 65 70 75 80
 Asn Gly Thr Thr Arg Arg Ala Ala Thr Lys Ser Asn Lys Asp Ala Ala
 85 90 95
 Gly Leu Lys Ser Ala Ser Gln Glu Asp Asn Ala Phe Gly Met Asn Ser
 100 105 110
 Ser Ile Lys Ser Phe Gln Ser Ser Pro Asn Lys Ala Leu Asn Gln Ala

115 120 125
 Ala Ile Ser Pro Ser Glu Asn Ser Asn Ser Thr Ser Ser Thr
 130 135 140

<210> 649
 <211> 131
 <212> PRT
 <213> Eucalyptus grandis

<400> 649
 Gly Ala Pro Ala Ser Gly Gln Ser Ser His Ala Leu Gln Val Glu Glu
 1 5 10 15
 Thr Arg Asp Ser Pro Leu Gly Phe Val Val Lys Val Glu Asp Arg Leu
 20 25 30
 Ser Ser Gly Ser Gly Gly Ser Ala Val Val Asp Glu Asp Gly Pro Gln
 35 40 45
 Leu Val Asp Ser Gly His Ser Tyr Phe His Cys Asn Asp Tyr Pro Gly
 50 55 60
 Ser Leu Val Ala Val Asn Gly Leu Gln Ser Glu Asp Asp Gly Ser Asp
 65 70 75 80
 Asp Ser Arg Gly Tyr Cys Ser Glu Ile Phe Ala Ala Ala Glu Glu Pro
 85 90 95
 His Gln Glu Gly Gly Val Pro Asn Gly Val Val Gly Val Ala Leu Val
 100 105 110
 Leu Gly Phe Arg Leu Leu Val Cys Ser Arg Lys Trp Phe Lys Ser Asn
 115 120 125
 Met Cys Ser
 130

<210> 650
 <211> 152
 <212> PRT
 <213> Eucalyptus grandis

<400> 650
 Ser Arg Leu Gln Ala Val Asn Arg Lys Leu Thr Ala Met Asn Lys Leu
 1 5 10 15
 Leu Met Glu Glu Asn Asp Arg Leu Gln Lys Val Ser Gln Leu Val
 20 25 30
 Tyr Glu Asn Ser Tyr Phe Arg Gln Gln Thr Gln Asn Ala Thr Leu Ala
 35 40 45
 Thr Thr Asp Thr Ser Cys Glu Ser Val Val Thr Ser Gly Gln His His
 50 55 60
 Leu Thr Pro Gln His Pro Pro Arg Asp Ala Ser Pro Ala Gly Leu Leu
 65 70 75 80
 Ser Ile Ala Glu Glu Thr Leu Thr Glu Phe Leu Ser Lys Ala Thr Gly
 85 90 95
 Thr Ala Val Glu Trp Val Gln Leu Pro Gly Met Lys Pro Gly Pro Asp
 100 105 110
 Ser Ile Gly Ile Ile Ala Ile Ser His Gly Cys Thr Gly Val Ala Ala
 115 120 125
 Arg Ala Cys Gly Leu Val Gly Leu Glu Pro Ser Arg Val Ala Glu Ile
 130 135 140
 Leu Lys Asp Arg Pro Ser Trp Tyr
 145 150

<210> 651
 <211> 151
 <212> PRT
 <213> Eucalyptus grandis

<400> 651
 Asp Asp Val Cys Gly Gly Lys Arg Pro Glu Arg Pro Phe Phe Cys
 1 5 10 15
 Thr Tyr Asp Gly Glu Glu Asn Gly Asp Asp Tyr Asp Glu Tyr Leu
 20 25 30
 His Gln Pro Glu Lys Lys Arg Arg Leu Ser Ile Glu Gln Val Leu Tyr
 35 40 45
 Leu Glu Lys Ser Phe Glu Thr Asp Asn Lys Leu Glu Pro Asp Lys Lys
 50 55 60
 Val Gln Leu Ala Lys Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Ile
 65 70 75 80
 Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Met Glu Lys
 85 90 95
 Asp Phe Asp Lys Leu Gln Ala Ser Phe Asn Cys Leu Lys Ser Asp Tyr
 100 105 110
 Glu Ser Leu Leu Asn Glu Lys Glu Lys Leu Lys Ala Glu Val Ile His
 115 120 125
 Leu Thr His Gln Leu Glu Gln Arg Ser Asn Gly Ile Leu Asn His Ser
 130 135 140
 Thr Tyr Leu Asn Asn Cys Thr
 145 150

<210> 652
 <211> 85
 <212> PRT
 <213> Eucalyptus grandis

<400> 652
 Thr Ala Lys Leu Lys Ser Ser Ile Phe Leu Leu Pro Leu His Gln Arg
 1 5 10 15
 Leu Ile Leu Lys Lys Ile Glu Arg Gln Gln Val Phe Arg Asp Gly Phe
 20 25 30
 Leu Val Leu Leu Glu Gly Gly Leu Ala Met Gly Ile Glu Glu Ala Thr
 35 40 45
 Lys Arg Gln Ser Ile Phe Ser Tyr Pro Glu Asp Leu Tyr Asn Glu Glu
 50 55 60
 Tyr Tyr Asp Asp Gln Ala Pro Glu Lys Lys Arg Arg Leu Thr Pro Glu
 65 70 75 80
 Gln Val His Leu Leu
 85

<210> 653
 <211> 99
 <212> PRT
 <213> Eucalyptus grandis

<400> 653
 Met Glu Trp Glu Lys Gln Glu Gln His His Pro His His His His
 1 5 10 15
 Pro His His His Pro Gln Gln Gln Gln Gln His His Gln Gln Gln Gln
 20 25 30
 Gln Pro Gln Gln Gln Gln Ala Lys Glu Ala Gln Gln Gln Gln Gln
 35 40 45
 Gln Gln Gly Gly Glu Gly Met Gly Asn Gly Thr Ala Ala Gly Asn Gly
 50 55 60
 Gly Gly Val Leu Tyr Val Lys Val Met Thr Asp Glu Gln Leu Glu Thr
 65 70 75 80
 Leu Arg Lys Gln Ile Ala Val Tyr Ala Ser Ile Cys Glu Gln Leu Val
 85 90 95
 Glu Met His

<210> 654
 <211> 150
 <212> PRT
 <213> Eucalyptus grandis

<400> 654
 Ala Arg Gly Pro Val Leu Leu Ala Glu Tyr Thr Glu Phe Ser Gly Asn
 1 5 10 15
 Phe Thr Ser Val Ala Ser Gln Cys Leu Gln Lys Leu Pro Ala Thr Ser
 20 25 30
 Asn Lys Phe Thr Tyr Asn Cys Asp Gly His Thr Phe Asn Tyr Leu Val
 35 40 45
 Asp Asp Gly Leu Thr Tyr Cys Val Val Ala Val Glu Ser Val Gly Arg
 50 55 60
 Gln Ile Pro Met Ala Phe Leu Glu Arg Ile Lys Glu Asp Phe Thr His
 65 70 75 80
 Arg Tyr Asp Ala Gly Lys Ala Ala Thr Ala Ser Ala Asn Ser Leu Asn
 85 90 95
 Arg Glu Phe Gly Pro Lys Leu Lys Glu His Met Gln Tyr Cys Val Asp
 100 105 110
 His Pro Glu Glu Ile Ser Lys Leu Ala Lys Val Lys Ala Gln Val Ser
 115 120 125
 Glu Val Lys Gly Val Met Met Glu Asn Ile Glu Lys Val Leu Asp Arg
 130 135 140
 Gly Glu Lys Ile Glu Leu
 145 150

<210> 655
 <211> 96
 <212> PRT
 <213> Eucalyptus grandis

<400> 655
 Leu Gln Tyr Asp Trp His His Leu Ser Phe Cys Val Ile Ile Ser Val
 1 5 10 15
 Leu Asn Leu Gln Asn Thr Ile Asn Gly Ser Cys Ser Met Glu Ser Ile
 20 25 30
 Leu Glu Arg Tyr Glu Arg Tyr Thr Tyr Ala Glu Arg Gln Gln Val Ala
 35 40 45
 Thr Asp Ser Pro Gln Val Gln Gly Ser Trp Ser Leu Glu Tyr Pro Lys
 50 55 60
 Leu Val Ala Arg Ile Glu Val Leu Gln Arg Asn Ile Arg Asn Leu Ser
 65 70 75 80
 Gly Glu Glu Leu Asp Pro Leu Ser Leu Arg Glu Leu Gln Tyr Leu Glu
 85 90 95

<210> 656
 <211> 338
 <212> PRT
 <213> Eucalyptus grandis

<400> 656
 Met Ala Thr Tyr Tyr His Gln Ser Ser Ser Asp Pro Asp Gly Ala Leu
 1 5 10 15
 Gln Thr Leu Val Leu Met Asn Pro Ala Ser Tyr Val His Tyr Ser Asp
 20 25 30
 Ala Pro Pro Pro His Gln Gln Pro Ser Ala Ile Phe Leu Asn Ser Ser
 35 40 45
 Thr Ala Gly Pro Pro Ala Ser Gln Thr Gln Gln Phe Val Gly Ile Pro
 50 55 60

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Leu Pro Gly Ser Ala Ala Asp Ser Gln Pro Ser Ser Met His Val Asn
65      70      75      80
His Asp Leu Ser Ser Met His Gly Phe Met Pro Arg Val Gln Tyr Asn
      85      90      95
Leu Trp Ser Ser Leu Asp Pro Ser Thr Ala Ala Arg Glu Ala Ser Arg
      100      105      110
Thr His Gln Gln Gln Gly Leu Ser Leu Ser Pro Gln Gln Pro
      115      120      125
Pro Pro Thr Pro Ala Gly Tyr Arg Ser Phe Val Arg Ala Glu Arg Ser
      130      135      140
Gly Asp Gly Ala Ala Gly Ser Gln His Pro Pro Ala Ile Ser Gly Gly
      145      150      155      160
Glu Asp Val Arg Ile Ser Gly Gly Ser Pro Ser Ser Ala Ser Gly Val
      165      170      175
Thr Asn Gly Ala Ala Val Gly Ser Gly Met Gln Gly Val Leu Leu Ser
      180      185      190
Ser Lys Tyr Leu Lys Ala Ala Gln Glu Leu Leu Glu Glu Val Val Asn
      195      200      205
Val Gly Asn Thr Gly Ile Lys Ala Glu Met Leu Lys Lys Ala Ser Gly
      210      215      220
Gln Ser Lys Pro Gly Gly Glu Ser Ala Ala Leu Lys Glu Glu Gly Gly
      225      230      235      240
Gly Asp Gly Ser Gly Lys Arg Gly Ala Glu Leu Ser Met Ala Glu Arg
      245      250      255
Gln Glu Ile Gln Met Lys Lys Ala Lys Leu Ile Asn Met Leu Asp Glu
      260      265      270
Val Glu Gln Arg Tyr Arg Gln Tyr His Asn Gln Met Gln Ile Val Ile
      275      280      285
Ser Ser Phe Glu Gln Ala Ala Gly Ile Gly Ser Ala Arg Thr Tyr Thr
      290      295      300
Ala Leu Ala Leu Gln Thr Ile Ser Lys Gln Phe Arg Cys Leu Lys Asp
      305      310      315      320
Ala Ile Ala Gly Gln Ile Arg Ala Ala Asn Lys Ser Leu Gly Glu Glu
      325      330      335
Asp Gly

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<210> 657
<211> 123
<212> PRT
<213> Eucalyptus grandis

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<400> 657
Val Glu Gln Val Gln Phe Leu Glu Lys Ser Phe Glu Val Glu Asn Lys
1      5      10      15
Leu Glu Pro Asp Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu Gln
      20      25      30
Pro Arg Gln Val Ala Ile Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys
      35      40      45
Thr Lys Gln Leu Glu Lys Asp Tyr Glu Thr Leu Gln Ala Ser Phe Asn
      50      55      60
Thr Leu Lys Ser Asp Tyr Asp Thr Leu Ile Lys Glu Arg Asn Asp Leu
      65      70      75      80
Lys Ala Glu Val Leu Asn Leu Thr Asp Lys Leu Leu His Lys Gly Asn
      85      90      95
Glu Lys Glu Ser Ser Glu Ser Ser Ser Lys Ser Ser Gln Gly Leu Phe
      100      105      110
Gln Asn Pro Ile Ala Asp Ser Val Ser Glu Asp
      115      120

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<210> 658

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<211> 128
 <212> PRT
 <213> Eucalyptus grandis

<400> 658
 Ala Ile Ile Ser Ser Asp Gln Met Glu Arg Arg Met Leu Glu Ala Ala
 1 5 10 15
 Arg Lys Gly Asn Val His Glu Leu Glu Asp Leu Ile Ser Ser Asn Glu
 20 25 30
 Leu Ile Leu Glu Glu Met Asp Leu Glu Gly Ala Gly His Thr Pro Leu
 35 40 45
 His Val Ala Cys Val Ala Gly His Leu Asp Phe Val Arg Glu Leu Leu
 50 55 60
 Lys Arg Thr Pro Lys Leu Ala Glu Lys Val Asn Thr Asp Gly Phe Ser
 65 70 75 80
 Pro Leu His Ile Ala Ala Ala Arg Gly Asp Val Glu Ile Ala Arg Glu
 85 90 95
 Leu Leu Thr Met Gly Pro His Leu Cys Ser Val Lys Gly Arg Glu Arg
 100 105 110
 Arg Ile Pro Leu His Tyr Ala Ala Met Asn Gly Lys Val Asp Val Met
 115 120 125

<210> 659
 <211> 159
 <212> PRT
 <213> Eucalyptus grandis

<400> 659
 Arg Leu Ser Lys Asp Gln Ser Ala Val Leu Glu Glu Ser Phe Lys Glu
 1 5 10 15
 His Asn Thr Leu Asn Pro Lys Gln Lys Leu Ala Leu Ala Lys Gln Leu
 20 25 30
 Gly Leu Arg Pro Arg Gln Val Glu Val Trp Phe Gln Asn Arg Arg Ala
 35 40 45
 Arg Thr Lys Leu Lys Gln Thr Glu Val Asp Cys Glu Tyr Leu Lys Arg
 50 55 60
 Cys Cys Glu Ser Leu Thr Glu Glu Asn Arg Arg Leu Gln Lys Glu Val
 65 70 75 80
 Gln Glu Leu Arg Ala Leu Lys Leu Ser Pro Gln Phe Tyr Met His Leu
 85 90 95
 Ser Pro Pro Thr Thr Leu Thr Met Cys Pro Ser Cys Glu Arg Val Ala
 100 105 110
 Ala Pro Ser Pro Pro Ser Ala Val Gly Arg Pro Leu Ala Ala Val Pro
 115 120 125
 Ala His Pro Arg Pro Val Pro Leu Ile Asn Pro Trp Ala Pro Ala Ala
 130 135 140
 Ala Leu Glu Ile Val Asp Pro Pro Gly Leu Gln Glu Phe Asp Ile
 145 150 155

<210> 660
 <211> 115
 <212> PRT
 <213> Eucalyptus grandis

<400> 660
 Met Ala Arg Glu Lys Ile Lys Ile Lys Lys Ile Asp Asn Val Thr Ala
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Arg Gly Leu Phe Lys Lys Ala
 20 25 30
 Gly Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Val Val Ile Phe
 35 40 45

Ser Ala Thr Gly Lys Leu Phe Glu Tyr Ser Ser Ser Ser Met Lys Asp
 50 55 60
 Thr Leu Glu Arg Tyr Thr Leu His His Asn Asn Leu Glu Asn Met Asp
 65 70 75 80
 Gln Pro Ser Leu Glu Leu Gln Leu Glu His Ser Asn Asn Met Arg Leu
 85 90 95
 Ser Lys Glu Val Ala Glu Lys Ser His Arg Leu Arg Gln Leu Arg Gly
 100 105 110
 Glu Asp Leu
 115

<210> 661
 <211> 118
 <212> PRT
 <213> Eucalyptus grandis

<400> 661
 Gln Val Ala Val Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys
 1 5 10 15
 Gln Leu Glu Arg Asp Tyr Asp Tyr Leu Lys Ser Ser Tyr Asp Ser Leu
 20 25 30
 Leu Ser Asp Tyr Asp Ser Ile Leu Lys Glu Asn Glu Lys Leu Lys Leu
 35 40 45
 Glu Val Tyr Ser Leu Thr Glu Lys Leu Gln Gly Lys Glu Val Asp Gly
 50 55 60
 Ala Pro Met Thr Gly Pro Ser Glu Pro Ala Pro Leu Glu Glu Ala Asp
 65 70 75 80
 Val Gln Ala Val Gln Phe Ser Ala Lys Val Glu Asp Arg Leu Ser Thr
 85 90 95
 Arg Ser Gly Gly Ser Ala Val Ile Asp Glu Glu Gly Pro Gln Leu Val
 100 105 110
 Asp Ser Gly Asn Ser Tyr
 115

<210> 662
 <211> 74
 <212> PRT
 <213> Eucalyptus grandis

<400> 662
 Met Glu Ala Gly Arg Phe Leu Phe Asp Pro Pro Ala Leu Gln Gly Asn
 1 5 10 15
 Ile Leu Phe Leu Asp Lys Gly Ser Arg Ser Met Met Gly Met Glu Glu
 20 25 30
 Ser Pro Lys Arg Arg Arg Phe Phe Cys Ser Pro Asp Glu Leu Phe Asp
 35 40 45
 Glu Glu Tyr Tyr Asp Glu Gln Met Pro Glu Lys Lys Arg Arg Leu Thr
 50 55 60
 Pro Glu Gln Val Leu Leu Glu Lys Ser
 65 70

<210> 663
 <211> 152
 <212> PRT
 <213> Eucalyptus grandis

<400> 663
 Met Tyr Gly Leu Cys Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
 1 5 10 15
 Glu Glu Tyr Ser Glu Arg Ala Leu Met Ser Pro Glu Asn Leu Val Leu
 20 25 30


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Pro Ser Glu Tyr Gln Ala Trp Leu Cys Ser Ala Gly Phe Arg Asp Asn
      35      40      45
Arg Ile Pro Met Tyr Gly Phe Gly Ser Glu Glu Phe Val Ser Ser Ala
      50      55      60
Ser Gly Met Ser Glu Thr Ala Ser Val Thr Pro Asp Gln Glu Asp Ala
      65      70      75      80
Ala Glu Thr Ala Ile Lys Ser Lys Ile Lys Ser His Pro Ser Tyr Pro
      85      90      95
Arg Leu Leu His Ala Tyr Ile Asp Cys Gln Lys Val Gly Ala Pro Pro
      100      105      110
Glu Val Val Gly Leu Leu Asp Glu Ile Arg Pro Glu Asn Gly Val Cys
      115      120      125
Lys Arg Asp Ala Ala Val Ser Thr Cys Leu Gly Ala Asp Pro Glu Leu
      130      135      140
Asp Glu Phe Met Glu Thr Tyr Thr
      145      150

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<210> 664
 <211> 56
 <212> PRT
 <213> Eucalyptus grandis

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<400> 664
Met Ala Leu Ala Met His Arg Glu Cys Ser Ser Lys Gln Met Asp Ala
      1      5      10      15
Ser Lys Tyr Val Arg Tyr Thr Pro Glu Gln Val Glu Ala Leu Glu Arg
      20      25      30
Val Tyr Asn Glu Cys Pro Lys Pro Ser Ser Leu Arg Arg Gln Gln Leu
      35      40      45
Ile Arg Glu Cys Pro Ile Leu Cys
      50      55

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<210> 665
 <211> 135
 <212> PRT
 <213> Eucalyptus grandis

```

<400> 665
Met Ala Gly Glu Glu Pro Tyr Ser Ala Asp Thr Asn Ser Asp Thr Phe
      1      5      10      15
Ala Asp Glu Glu Thr Leu Ile Pro Ser Ser Ser Glu Ala Leu Glu Ser
      20      25      30
Ala Trp Val Pro Thr Ser Ser Thr Ala His His Gly Ser Lys Ser Val
      35      40      45
Val Asn Phe Glu Asp Val Cys Gly Gly Asp Thr Asn Thr Ala Pro
      50      55      60
Arg Pro Tyr Leu Arg Gln Ile Asp Leu Lys Glu Ala Val Glu Glu
      65      70      75      80
Asp Tyr Gly Asp Gly Asn Phe Gln Pro Pro Gly Lys Lys Arg Arg Leu
      85      90      95
Ser Ala Asp Gln Val His Phe Leu Glu Arg His Phe Glu Val Glu Asn
      100      105      110
Lys Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu
      115      120      125
Gln Pro Arg Gln Val Ala Ile
      130      135

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<210> 666
 <211> 226
 <212> PRT
 <213> Eucalyptus grandis

<400> 666
 Ser Ala Ala Ser Leu Lys Ala Ser Pro Phe Gly Tyr Pro Gly Met Arg
 1 5 10 15
 Pro Thr Arg Phe Thr Gly Ser Gln Ile Ile Met Pro Leu Gly His Thr
 20 25 30
 Ile Glu His Glu Glu Met Leu Glu Val Ile Arg Leu Glu Gly His Ser
 35 40 45
 Leu Ala Gln Glu Asp Ala Phe Val Ser Arg Asp Ile His Leu Leu Gln
 50 55 60
 Ile Cys Ser Gly Ile Asp Glu Asn Ala Val Gly Val Cys Ser Glu Leu
 65 70 75 80
 Ile Phe Ala Pro Ile Asp Glu Met Phe Pro Asp Asp Ala Pro Leu Leu
 85 90 95
 Pro Ser Gly Phe Arg Ile Ile Pro Leu Asp Ser Lys Ser Ser Asp Val
 100 105 110
 Gln Asp Ser Leu Thr Thr Asn Arg Thr Leu Asp Leu Thr Ser Ser Leu
 115 120 125
 Glu Val Gly Pro Ala Ser Thr Asn Cys Val Gly Asp Val Ala Pro Ser
 130 135 140
 His Gly Ala Arg Ser Val Leu Thr Ile Ala Phe Gln Phe Pro Phe Asp
 145 150 155 160
 Ala Asn Thr Gln Asp Asn Val Ala Val Met Ala Arg Gln Tyr Val Arg
 165 170 175
 Ser Val Ile Ser Ser Val Gln Arg Val Ala Met Val Ile Ser Pro Ser
 180 185 190
 Gly Leu Gly Pro Ser Ile Asn Pro Lys Leu Ser Gln Gly Ser Pro Glu
 195 200 205
 Ala Leu Thr Leu Ala Asn Trp Ile Cys Gln Ser Tyr Arg His Val Leu
 210 215 220
 Ile Ile
 225

<210> 667
 <211> 147
 <212> PRT
 <213> Eucalyptus grandis

<400> 667
 Val Leu Leu Arg Phe Leu Thr Thr Ala Thr Thr Ile Cys Asn Asn Asn
 1 5 10 15
 Ala Gly Gly Ser Gly Ser Gly Ser Gly Ser Gly Cys Phe Phe Met Asp
 20 25 30
 Asn Asp Val Lys Ala Lys Ile Met Ala His Pro His Tyr His Arg Leu
 35 40 45
 Leu Ser Ala Tyr Val Asn Cys Gln Lys Val Gly Ala Pro Pro Gly Val
 50 55 60
 Val Ala Lys Leu Glu Glu Ala Cys Ala Ser Ala Ala Ile Met Ala Gly
 65 70 75 80
 Asn Ser Gly Met Ser Asn Thr Gly Cys Ile Gly Glu Asp Pro Ala Leu
 85 90 95
 Asp Gln Phe Met Glu Ala Tyr Cys Glu Met Leu Thr Lys Tyr Glu Gln
 100 105 110
 Glu Leu Ser Lys Pro Phe Lys Glu Ala Met Leu Phe Leu Gln Arg Ile
 115 120 125
 Glu Cys Gln Phe Lys Ala Leu Thr Leu Gly Val Pro Ser Asp Ser Val
 130 135 140
 Ala Leu Ser
 145

<210> 668

<211> 176
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 668
 Gly Ser Ser Lys Gly Val Gly Ile Pro Arg Leu Arg Phe Leu Asp Gln
 1 5 10 15
 Gln Leu Arg Gln Gln Arg Ala Leu Gln Gln Leu Gly Met Met Gln Gln
 20 25 30
 His Ala Trp Arg Pro Gln Arg Gly Leu Pro Glu Ser Ser Val Ser Ile
 35 40 45
 Leu Arg Ala Trp Leu Phe Glu His Phe Leu His Pro Tyr Pro Lys Asp
 50 55 60
 Ser Asp Lys Ile Leu Leu Ala Arg Gln Thr Gly Leu Thr Arg Ser Gln
 65 70 75 80
 Val Ser Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp Lys Pro Met
 85 90 95
 Val Glu Glu Met Tyr Lys Glu Glu Ile Gly Asp Ala Glu Met Asp Ser
 100 105 110
 Asn Ser Ser Ser Asp Thr Ala Lys Pro Lys Thr Gly Asp Ile Lys Ser
 115 120 125
 Ser Met Glu Asp Arg Val Glu Glu Val Gln Gln Ser Ser Thr Ala Thr
 130 135 140
 Gln Arg Cys Ser Ser Gly Gln Leu Met Asp Ser Ser Phe Asp Arg Thr
 145 150 155 160
 Pro Asp Val Glu Met Ala Gly His Ser Val Gly Phe Asn Tyr Leu Asn
 165 170 175

<210> 669
 <211> 294
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 669
 Met Ser Glu Val Gln Val Thr Gln Met Lys Ser Asp Gly Thr Leu Glu
 1 5 10 15
 Glu Ser Gly Glu Ala Arg Arg Leu Arg Asn Ser Leu Glu Glu Met Ala
 20 25 30
 Asn Glu Gly Lys Ser Pro Ser Ile Leu Lys Glu Cys Gly Leu Pro Glu
 35 40 45
 Asn Ser Phe Val Ser Ile Pro Gln Lys Met Thr Glu Asn Arg Trp Ser
 50 55 60
 Trp Ser Glu Val Lys Tyr Leu Ser Asn Cys Leu Leu Leu Ala Leu Asp
 65 70 75 80
 Ala Ser Leu Glu His Ser Leu Leu Gly Ser Leu Met Asn Met Asp Arg
 85 90 95
 Tyr Ala Ala Ala Glu Ser Tyr His Lys Leu Ala Met Ala Phe Ala Pro
 100 105 110
 Val Pro Asp Leu His Ile Met Trp Leu Leu His Leu Cys Asp Ala His
 115 120 125
 Gln Glu Met Gln Ser Trp Ala Glu Ala Ala Gln Cys Ala Val Ala Val
 130 135 140
 Ala Gly Val Val Met Gln Ala Leu Val Ala Arg Asn Asp Gly Val Trp
 145 150 155 160
 Ser Lys Asp His Val Thr Ala Leu Arg Lys Ile Cys Pro Met Val Ser
 165 170 175
 Ser Glu Ile Ser Cys Glu Ala Ser Ala Ala Glu Val Glu Gly Tyr Gly
 180 185 190
 Ala Ser Lys Leu Thr Val Asp Ser Ala Val Lys Tyr Leu Gln Leu Ala
 195 200 205
 Asn Lys Leu Phe Ser Gln Ala Glu Leu Tyr His Phe Cys Ala Ser Ile

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      210              215              220
Leu Glu Leu Val Ile Pro Val Tyr Lys Ser Arg Ala Tyr Gly Gln
225              230              235              240
Leu Ala Lys Cys His Thr Leu Leu Thr Asn Ile Tyr Glu Ser Ile Leu
      245              250              255
Glu Gln Glu Ser Ser Pro Ile Pro Phe Thr Asp Ala Thr Tyr Tyr Arg
      260              265              270
Val Gly Phe Tyr Gly Glu Lys Phe Gly Lys Leu Asp Arg Lys Glu Tyr
      275              280              285
Val Tyr Arg Glu Pro Arg
      290

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<210> 670

<211> 144

<212> PRT

<213> Eucalyptus grandis

<400> 670

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His Thr Lys Thr His His His His Ser Ile Ala Ile Ser Asn Pro Thr
1              5              10              15
Lys Ser Met Ser Gln Asp Tyr His His Pro Ser Ile Phe Ala Phe Ser
      20              25              30
Asn Asn Gly Phe Glu Arg Pro Asp Val Ala Ala Ser Ala Ala Ser
      35              40              45
Asp Gln Glu Gln Gln His His Val Ala Gln Gln Ile Cys Arg Asp Lys
      50              55              60
Leu Arg Val Gln Gly Phe Asp Gln Pro Pro Pro Gln Leu Val Gly
      65              70              75              80
Met Glu Glu Glu Pro Gly Gly Leu Pro Ala Tyr Glu Thr Ala Gly Met
      85              90              95
Leu Ser Glu Met Phe Asn Phe Pro Pro Gly Gly Ala Ala Ala Glu
      100              105              110
Leu Leu Glu Gln Pro Met Ala Ser Gly Tyr Arg Ala Ala Arg Pro Ser
      115              120              125
Leu Pro Thr Val Ser Gly Thr Ala Gln Lys Thr Gln Val Cys Ile Gly
      130              135              140

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<210> 671

<211> 125

<212> PRT

<213> Eucalyptus grandis

<400> 671

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Ile Val Asp His Met Asp Leu Glu Pro Trp Ser Val Pro Glu Val Leu
1              5              10              15
Arg Pro Leu Tyr Glu Ser Ser Thr Leu Leu Ala Gln Arg Thr Thr Met
      20              25              30
Ala Ala Leu Arg Asn Leu Arg Gln Ile Ser Gln Glu Val Ser Gln Pro
      35              40              45
Asn Val Thr Gly Trp Gly Arg Arg Pro Ala Ala Leu Arg Ala Leu Gly
      50              55              60
Gln Arg Leu Ser Lys Gly Phe Asn Glu Ala Val Asn Gly Phe Met Asp
      65              70              75              80
Asp Gly Trp Ser Met Leu Glu Ser Asp Gly Val Asp Asp Val Thr Leu
      85              90              95
Leu Ile Asn Ser Ser Pro Ala Lys Met Ala Gly Val Asn Ile Ser Tyr
      100              105              110
Ala Ser Gly Phe Pro Ser Met Thr Ser Ala Val Leu Cys
      115              120              125

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<210> 672

<211> 104
 <212> PRT
 <213> Eucalyptus grandis

<400> 672
 Met Ala Thr Ala Phe Ala Gly Thr Gln Gln Lys Cys Lys Ala Cys Asp
 1 5 10 15
 Lys Thr Val Tyr Leu Val Asp Gln Leu Thr Ala Asp Asn Lys Val Phe
 20 25 30
 His Lys Ala Cys Phe Arg Cys His His Cys Lys Gly Thr Leu Lys Leu
 35 40 45
 Ser Asn Tyr Cys Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe
 50 55 60
 Asn Gln Leu Phe Lys Met Thr Gly Ser Leu Asp Lys Ser Phe Glu Gly
 65 70 75 80
 Thr Pro Lys Thr Val Asn Arg Ser Ser Glu Gln Gly Gln Ser Asn Ala
 85 90 95
 Lys Val Ser Ser Met Phe Ala Gly
 100

<210> 673
 <211> 131
 <212> PRT
 <213> Eucalyptus grandis

<400> 673
 Asp Asp Asp Glu Asp Asp Asp Leu Phe Gln Asp Arg Phe Ser Ile Ala
 1 5 10 15
 Tyr Asn Leu Asp Arg Glu Phe Gly Pro Arg Leu Lys Glu His Met Gln
 20 25 30
 Tyr Cys Met Ser His Pro Glu Glu Met Ser Lys Leu Ser Lys Leu Lys
 35 40 45
 Ala Gln Ile Ser Glu Val Lys Gly Ile Met Val Asp Asn Ile Glu Lys
 50 55 60
 Val Leu Asp Arg Gly Glu Arg Ile Glu Leu Leu Val Asp Lys Thr Glu
 65 70 75 80
 Asn Leu Gln Phe Gln Ala Asp Ile Phe Gln Arg Gln Gly Arg Gln Leu
 85 90 95
 Arg Arg Lys Met Trp Phe Gln Asn Leu Gln Met Lys Val Val Val Ala
 100 105 110
 Gly Ala Val Val Ile Val Ile Phe Leu Leu Trp Leu Ile Ala Lys Trp
 115 120 125
 Gly Ser Lys
 130

<210> 674
 <211> 90
 <212> PRT
 <213> Eucalyptus grandis

<400> 674
 Met Ala Thr Ala Phe Ala Gly Thr Gln Gln Lys Cys Lys Ala Cys Asp
 1 5 10 15
 Lys Thr Val Tyr Leu Val Asp Gln Leu Thr Ala Asp Asn Lys Val Phe
 20 25 30
 His Lys Ala Cys Phe Arg Cys His His Cys Lys Gly Thr Leu Lys Leu
 35 40 45
 Ser Asn Tyr Cys Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe
 50 55 60
 Asn Gln Leu Phe Lys Met Thr Gly Ser Leu Asp Lys Ser Phe Glu Gly
 65 70 75 80

Thr Pro Lys Thr Val Asn Arg Ser Ser Glu
85 90

<210> 675
<211> 95
<212> PRT
<213> Eucalyptus grandis

<400> 675
Val Tyr Ala Pro Ile Asp Ser Thr Ala Met Thr Ile Ala Leu Ser Gly
1 5 10 15
Glu Asp Thr Ser Thr Val Gln Ile Leu Pro Ser Gly Phe Thr Ile Ser
20 25 30
Ser Asp Gly Arg Ile Gly Thr Ser Ser Ser Lys Pro Ala Gly Thr Leu
35 40 45
Leu Thr Val Ala Phe Gln Ile Leu Val Ser Ser His Ser Gly Pro Glu
50 55 60
Gln Leu Ser Val Glu Ser Val Ala Thr Val Asn Thr Leu Ile Ser Ala
65 70 75 80
Thr Val Gln Lys Ile Lys Ala Ala Leu Asn Trp Ser Ala Ala Glu
85 90 95

<210> 676
<211> 141
<212> PRT
<213> Eucalyptus grandis

<400> 676
Gln Met Glu Arg Ala Ala Arg Lys Gly Asn Ile His Glu Leu Asn Asp
1 5 10 15
Leu Ile Ser Ser Asn Glu Gln Ile Leu Glu Glu Met Ala Leu Glu Gly
20 25 30
Ala Gly His Thr Pro Leu His Ile Ala Cys Met Gly Gly His Leu Asp
35 40 45
Phe Ile Arg Glu Leu Leu Lys His Met Pro Lys Leu Ala Glu Lys Val
50 55 60
Asn Pro Cys Gly Phe Ser Pro Leu His Ile Ala Ala Ala Arg Gly Asp
65 70 75 80
Val Glu Ile Ala Lys Glu Leu Leu Lys Val Asn Thr Asp Leu Cys Ser
85 90 95
Val Glu Gly Arg Glu Arg Arg Ile Pro Leu His Asp Ala Val Ile His
100 105 110
Gly Glu Val Asp Val Met Glu Ile Leu Leu Ser Thr Ser Pro Glu Ser
115 120 125
Val Glu Lys Lys Thr Ala Arg Lys Glu Thr Val Leu His
130 135 140

<210> 677
<211> 121
<212> PRT
<213> Eucalyptus grandis

<400> 677
Pro Ser Asp Ile Phe Leu Leu Gln Leu Cys Asn Gly Val Asp Glu Asn
1 5 10 15
Ala Val Gly Thr Cys Ala Glu Leu Leu Phe Ala Pro Ile Asp Ala Ser
20 25 30
Phe Ser Asp Asp Ala Pro Ile Ile Pro Ser Gly Phe Arg Ile Ile Pro
35 40 45
Leu Asp Pro Gly Ser Asp Ala Phe Ser Pro Asn Arg Thr Leu Asp Leu
50 55 60

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Ala Ser Ala Leu Asp Val Gly Pro Thr Gly Asn Lys Ala Val Gly Asp
65          70          75          80
Asn Ser Gly His Ser Gly Asn Thr Lys Ser Val Met Thr Ile Ala Phe
          85          90          95
Gln Phe Ala Phe Glu Leu His Leu Gln Glu Asn Val Ala Ser Met Ala
          100          105          110
Arg Gln Tyr Leu Arg Ser Ile Ile Ala
          115          120

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<210> 678
<211> 34
<212> PRT
<213> Eucalyptus grandis

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<400> 678
Met Gly Ile Asp Asp Leu Cys Asn Thr Gly Leu Val Leu Ser Leu Gly
1          5          10          15
Leu Glu Thr Pro Phe Lys Ile Glu Ala Gln Arg Gln Ala Lys Gln Arg
          20          25          30
Leu Asn

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<210> 679
<211> 110
<212> PRT
<213> Eucalyptus grandis

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<400> 679
Ile Asn Ala Pro Glu Ser Asp Pro Ser Leu Thr Pro Ala Ile Asn Arg
1          5          10          15
His Pro Phe Ser Glu Thr Gln Ala Thr Thr Leu Leu Gln Ala Thr Thr
          20          25          30
Ala Met Ile Ser Ser Ala Val Gln Val Ala Gly Pro Ala His Ile Asp
          35          40          45
Asp Pro Cys Arg Arg Ser Ile Gly Gly Ser Thr Gly Leu Gly Gly Ala
          50          55          60
Thr Asp Ile Gly Ser Ala Leu Ile Arg Phe Gly Thr Ala Ala Ala Ala
65          70          75          80
Thr Gly Asp Val Ser Leu Thr Leu Gly Leu Arg His Ala Gly Asn Val
          85          90          95
Pro Glu Lys Ser Ser Phe Ser Val Thr Asp Leu Gly Gly Cys
          100          105          110

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<210> 680
<211> 146
<212> PRT
<213> Eucalyptus grandis

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<400> 680
Phe Asn Glu Gly Asn Gly Thr Pro Ser Lys Gln Lys Ile Lys Glu Ile
1          5          10          15
Thr Thr Glu Leu Ser Gln His Gly Gln Ile Ser Glu Thr Asn Val Tyr
          20          25          30
Asn Trp Phe Gln Asn Arg Arg Ala Arg Ser Lys Arg Lys Met Gln Asn
          35          40          45
Ala Thr Gly Asn Asn Thr Glu Ser Glu Ala Glu Ala Glu Val Glu Ser
          50          55          60
Pro Lys Glu Met Lys Thr Lys Pro Glu Ile Phe Gln Ser Gln Gln Asn
65          70          75          80
Pro Val Ser Arg Asn Glu Asp Leu Cys Phe Gln Ser Pro Glu Ile Ser
          85          90          95

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Ser Asp Leu His Phe Ala Asp Ser Gln Thr Lys Val Glu Ser Met Val
 100 105 110
 Tyr Pro Asp Gly Ser Leu Arg Ser Arg Asn Arg Asn Leu Gly Gln Leu
 115 120 125
 Ser Phe Tyr Asp Ala Met Met Ser Asn Ser Gly Gly Leu Ala Gly Asn
 130 135 140
 Glu His
 145

<210> 681
 <211> 247
 <212> PRT
 <213> Eucalyptus grandis

<400> 681
 Pro Ile Asp Glu Ser Phe Ala Asp Asp Ala Pro Leu Leu Pro Ser Gly
 1 5 10 15
 Phe Arg Val Ile Gln Leu Asp Pro Lys Thr Asp Gly Pro Ala Pro Thr
 20 25 30
 Arg Thr Leu Asp Leu Ala Ser Thr Leu Glu Val Gly Ser Gly Gly Ala
 35 40 45
 Arg Pro Thr Cys Glu Ala Asp Ala Ser Thr Tyr Asn Leu Arg Ser Val
 50 55 60
 Leu Thr Ile Ala Phe Gln Phe Val Phe Glu Asn His Leu Arg Asp Thr
 65 70 75 80
 Val Ala Ile Met Ala Arg Gln Tyr Val Arg Ser Val Val Gly Ser Val
 85 90 95
 Gln Arg Val Ala Met Ala Ile Ala Pro Ser Arg Leu Gly Gly His Leu
 100 105 110
 Gly Pro Lys Ser Leu Ser Gly Ser Pro Glu Ala Leu Thr Leu Ala Arg
 115 120 125
 Trp Ile Cys Arg Ser Tyr Arg Ile Cys Ala Gly Ala Glu Leu Leu Arg
 130 135 140
 Gly Asp Ser Gln Ala Gly Asp Ala Val Leu Lys Glu Phe Trp His His
 145 150 155 160
 Ser Asp Ala Ile Met Cys Cys Ser Val Asn Thr Asn Val Ala Ser Pro
 165 170 175
 Val Phe Thr Phe Ala Asn Gln Ala Gly Leu Asp Met Leu Glu Thr Thr
 180 185 190
 Leu Val Ala Leu Gln Asp Ile Met Leu Glu Lys Val Leu Asp Glu Gly
 195 200 205
 Gly Arg Lys Val Leu Ser Ser Glu Phe Pro Lys Ile Met Gln Gln Gly
 210 215 220
 Ile Ala Tyr Leu Pro Ala Gly Val Cys Ile Ser Ser Met Gly Arg Pro
 225 230 235 240
 Val Ala Tyr Glu Gln Ala Val
 245

<210> 682
 <211> 147
 <212> PRT
 <213> Eucalyptus grandis

<400> 682
 Val Arg Leu Thr Lys Glu Gln Ser Ala Leu Leu Glu Glu Ser Phe Lys
 1 5 10 15
 Gln His Ser Thr Leu Asn Pro Lys Gln Lys Gln Ala Leu Ala Arg Gln
 20 25 30
 Leu Asn Leu Arg Pro Arg Gln Val Glu Val Trp Phe Gln Asn Arg Arg
 35 40 45
 Ala Arg Thr Lys Leu Lys Gln Thr Glu Val Asp Cys Glu Phe Leu Lys

50 55 60
 Lys Cys Cys Glu Thr Leu Thr Asp Glu Asn Arg Arg Leu Gln Lys Glu
 65 70 75 80
 Leu Gln Glu Leu Lys Ala Leu Lys Leu Ala Gln Pro Phe Tyr Met His
 85 90 95
 Met Pro Ala Ala Thr Leu Thr Met Cys Pro Ser Cys Glu Arg Ile Gly
 100 105 110
 Ala Gly Pro Ser Val Asp Gly Ala Ala Pro Thr Lys Gly Pro Phe Ser
 115 120 125
 Met Thr Thr Lys Ser His Leu Tyr Ser His His Phe Thr Asn Pro Ser
 130 135 140
 Ala Ala Cys
 145

<210> 683

<211> 121

<212> PRT

<213> Eucalyptus grandis

<400> 683
 Pro Leu Glu Phe His Asn Asp Val Arg Leu Thr Phe Ser Asn Ala Met
 1 5 10 15
 Thr Tyr Asn Pro Pro Ser Asn Asp Val His Leu Met Ala Asp Thr Leu
 20 25 30
 Asn Lys Phe Phe Asp Ile Arg Trp Lys Thr Ile Glu Lys Lys Leu Val
 35 40 45
 Val Gly Gly Pro Gln Pro Ser Ser Thr Lys Ser Ala Pro Pro Glu Glu
 50 55 60
 Val Lys Ala Ala Lys Ser Thr Ala Leu Pro Lys Lys Arg Lys Met Ser
 65 70 75 80
 Ser Gln Gln Glu Val Met Pro Ala Pro Leu Leu Gln Val Met Thr Asp
 85 90 95
 Glu Glu Lys His Lys Leu Gly Gln Glu Leu Glu Ser Leu Leu Gly Glu
 100 105 110
 Met Pro Glu Asn Ile Ile Asp Phe Leu
 115 120

<210> 684

<211> 36

<212> PRT

<213> Eucalyptus grandis

<400> 684
 Met Gln Leu Tyr Ala Pro Thr Thr Leu Ala Pro Ala Arg Asp Phe Trp
 1 5 10 15
 Leu Leu Arg Tyr Thr Ser Val Met Glu Asp Gly Ser Leu Val Val Cys
 20 25 30
 Glu Arg Ser Ile
 35

<210> 685

<211> 120

<212> PRT

<213> Eucalyptus grandis

<400> 685
 Arg Glu Leu Lys Thr Gln Leu Leu Arg Lys Tyr Ser Gly Tyr Leu Gly
 1 5 10 15
 Ser Leu Lys Gln Glu Phe Met Lys Lys Arg Lys Lys Gly Lys Leu Pro
 20 25 30
 Lys Glu Ala Arg Gln Gln Leu Leu Asp Trp Trp Ser Arg His Tyr Lys

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      35              40              45
Trp Pro Tyr Pro Ser Glu Ser Gln Lys Leu Ala Leu Ala Glu Ser Thr
50              55              60
Gly Leu Asp Gln Lys Gln Ile Asn Asn Trp Phe Ile Asn Gln Arg Lys
65              70              75              80
Arg His Trp Lys Pro Ser Glu Asp Met Gln Phe Val Val Met Asp Ala
85              90              95
Thr His Pro His Tyr Tyr Met Asp Asn Met Leu Gly Asn Pro Phe Pro
100              105              110
Met Asp Ile Ser Pro Thr Leu Leu
115              120

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<210> 686

<211> 93

<212> PRT

<213> *Eucalyptus grandis*

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<400> 686
Trp Pro Phe Lys Glu Pro Val Asp Ala Arg Glu Val Pro Asp Tyr Tyr
1              5              10              15
Asp Ile Ile Lys Asp Pro Met Asp Leu Lys Thr Met Thr Lys Arg Val
20              25              30
Glu Ser Glu Gln Tyr Tyr Val Thr Leu Glu Met Phe Ile Ala Asp Val
35              40              45
Lys Arg Met Phe Ala Asn Ala Arg Thr Tyr Asn Ser Pro Asp Thr Ile
50              55              60
Tyr Phe Lys Ile Ala Thr Arg Leu Glu Ala His Phe Gln Ser Lys Val
65              70              75              80
Gln Ser Asn Leu Gln Ser Gly Ala Gly Lys Ile Gln Gln
85              90

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<210> 687

<211> 185

<212> PRT

<213> *Eucalyptus grandis*

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<400> 687
Met Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn
1              5              10              15
Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Ala
20              25              30
Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe
35              40              45
Ser Ser Arg Gly Arg Leu Tyr Glu Tyr Ser Asn Asn Ser Ile Arg Ser
50              55              60
Thr Ile Glu Arg Tyr Lys Lys Ala Asn Ser Asp Ser Ser Asn Thr Ser
65              70              75              80
Thr Val Thr Glu Ile Asn Ala Gln Tyr Tyr Gln Gln Glu Ser Ala Lys
85              90              95
Leu Arg Gln Gln Ile Gln Met Leu Gln Asn Ser Asn Arg His Leu Met
100              105              110
Gly Asp Ser Leu Ser Ser Leu Ser Val Lys Glu Leu Lys Gln Leu Glu
115              120              125
Asn Arg Leu Glu Arg Gly Ile Thr Arg Ile Arg Ser Lys Lys His Glu
130              135              140
Met Leu Leu Thr Glu Ile Glu Tyr Leu Gln Lys Lys Glu Ile Glu Leu
145              150              155              160
Glu Asn Glu Ser Val Phe Leu Arg Thr Lys Ile Ala Glu Val Asp Arg
165              170              175
Ile Gln Gln Gly Asn Met Val Ala Ala
180              185

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<210> 688
 <211> 130
 <212> PRT
 <213> Eucalyptus grandis

<400> 688
 Met Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Ala Asn Ser
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Ser Gly Leu Leu Lys Lys Ala
 20 25 30
 Gln Glu Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Val Ile Ile Phe
 35 40 45
 Ser Asn Thr Gly Lys Leu Tyr Glu Phe Ser Ser Ser Gly Met Lys Gln
 50 55 60
 Ile Leu Ser Arg Tyr Asn Arg Cys Gln Asp Ser Pro Glu Ser Thr Val
 65 70 75 80
 Val Glu Tyr Lys Pro Glu Ser Thr Lys Glu Asp Asp Lys Val Val Asp
 85 90 95
 Thr Leu Lys Asp Glu Ile Ala Glu Leu Gln Met Arg Gln Leu Arg Leu
 100 105 110
 Leu Gly Lys Asp Leu Asn Gly Leu Ser Ile Lys Glu Leu Gln His Leu
 115 120 125
 Glu Gln
 130

<210> 689
 <211> 117
 <212> PRT
 <213> Eucalyptus grandis

<400> 689
 Leu Asp Thr Ala Leu Lys Arg Ile Arg Thr Arg Lys Asn Gln Leu Met
 1 5 10 15
 His Glu Ser Ile Ser Gln Leu Gln Lys Lys Glu Lys Ser Leu Gln Glu
 20 25 30
 Gln Asn Asn Val Leu Ser Lys Lys Ile Lys Glu Asn Glu Lys Val Met
 35 40 45
 Arg Glu Ser Gly Gln Trp Glu Gln Gln Thr Pro Ala Pro Thr Thr Ser
 50 55 60
 Ser Phe Met Leu Gln Pro Thr Leu Pro Leu Pro Ser Leu Thr Ile Gly
 65 70 75 80
 Asn Thr Phe Gln Thr Pro His Val Leu Gly Gly Ala Glu Gln Glu Glu
 85 90 95
 Arg Ser Gln Ala Arg Pro Ala Asn Thr Leu Met Pro Pro Trp Met Ile
 100 105 110
 Arg Arg Ser Asn Glu
 115

<210> 690
 <211> 140
 <212> PRT
 <213> Eucalyptus grandis

<400> 690
 Tyr Leu Ser Asp Leu Met Ser Ser Gly His Lys His Lys Arg Arg Lys
 1 5 10 15
 Gln Leu Gln Thr Val Glu Leu Lys Val Arg Met Asp Cys Asp Gly Cys
 20 25 30
 Glu Leu Lys Val Arg Lys Ala Leu Ser Ser Leu Asp Gly Val Lys Thr
 35 40 45

Val Glu Ile Asn Arg Lys Gln Gln Lys Val Thr Val Asn Gly Tyr Val
 50 55 60
 Asp Gln Asn Lys Val Leu Lys Arg Ala Lys Ser Thr Gly Lys Lys Ala
 65 70 75 80
 Glu Ile Trp Pro Tyr Ile Pro Tyr Ser Val Val Ala His Gln Pro Tyr
 85 90 95
 Ile Ala Gln Ser Tyr Asp Lys Lys Ala Pro Pro Gly His Val Arg Lys
 100 105 110
 Val Glu Pro Thr Ala Thr Ser Ala Ile Val Thr Arg His Glu Asp Pro
 115 120 125
 Tyr Met Thr Leu Phe Ser Asp Asn Pro Asn Ala
 130 135 140

<210> 691
 <211> 68
 <212> PRT
 <213> Eucalyptus grandis

<400> 691
 Arg Ile Glu Asn Lys Ile Asn Arg Gln Val Thr Phe Ala Lys Arg Lys
 1 5 10 15
 Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala
 20 25 30
 Glu Val Ala Leu Ile Ile Phe Ser Ser Arg Gly Lys Leu His Glu Phe
 35 40 45
 Cys Ser Gly Pro Arg Tyr Arg Val Phe Val Cys Tyr His Leu Phe Phe
 50 55 60
 Ser Leu Met Leu
 65

<210> 692
 <211> 140
 <212> PRT
 <213> Eucalyptus grandis

<400> 692
 Ile Asn Ala Gly Arg Phe Asp Gln Arg Thr Thr His Glu Glu Arg Arg
 1 5 10 15
 Leu Thr Leu Glu Thr Leu Leu His Asp Glu Glu Arg Tyr Gln Glu Thr
 20 25 30
 Val His Asp Val Pro Ser Leu Gln Glu Val Asn Arg Met Ile Ala Arg
 35 40 45
 Ser Glu Glu Glu Val Glu Leu Phe Asp Gln Met Asp Glu Glu Leu Asp
 50 55 60
 Trp Thr Glu Glu Met Thr Asn Tyr Glu Leu Val Pro Lys Trp Leu Arg
 65 70 75 80
 Ala Ser Thr Lys Glu Val Asn Ala Ala Ile Ala Thr Leu Ser Lys Lys
 85 90 95
 Pro Ser Lys Asn Thr Leu Phe Ala Ser Thr Ile Val Glu Pro Asn Glu
 100 105 110
 Pro Val Ser Glu Ser Val Arg Lys Arg Gly Arg Pro Lys Ser Lys Lys
 115 120 125
 His Pro Asn Tyr Lys Glu Leu Asp Asp Asp Asn Glu
 130 135 140

<210> 693
 <211> 126
 <212> PRT
 <213> Eucalyptus grandis

<400> 693

Ala Ala Gln Leu Lys His Ser Cys Glu Leu Leu Gly Glu Lys Asp Gly
 1 5 10 15
 Ala Gly Ser Ser Gly Ile Thr Lys Gly Glu Thr Pro Arg Leu Lys Leu
 20 25 30
 Leu Asp Gln Ser Leu Arg Gln Gln Arg Ala Phe His Gln Met Gly Met
 35 40 45
 Met Glu Gln Glu Ala Trp Arg Pro Gln Arg Gly Leu Pro Glu Arg Ser
 50 55 60
 Val Asn Ile Leu Arg Ala Trp Leu Phe Glu His Phe Leu His Pro Tyr
 65 70 75 80
 Pro Ser Asp Ala Asp Lys His Leu Leu Ala Arg Gln Thr Gly Leu Ser
 85 90 95
 Arg Asn Gln Val Ser Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp
 100 105 110
 Lys Pro Met Val Glu Glu Met Tyr Gln Gln Glu Ser Lys Glu
 115 120 125

<210> 694
 <211> 53
 <212> PRT
 <213> Eucalyptus grandis

<400> 694
 Phe Cys Ser Met Leu Lys Thr Leu Glu Arg Tyr Gln Lys Cys Asn Tyr
 1 5 10 15
 Gly Ala Leu Glu Pro Asn Val Ser Ala Arg Glu Ser Leu Glu Leu Ser
 20 25 30
 Cys Gln Gln Glu Tyr Leu Arg Leu Lys Ala Arg Tyr Glu Ala Leu Gln
 35 40 45
 Arg Thr Gln Arg Tyr
 50

<210> 695
 <211> 86
 <212> PRT
 <213> Eucalyptus grandis

<400> 695
 Lys Ile Glu Asp Val Arg Glu Glu Ile Leu Arg Lys Arg Arg Ala Gly
 1 5 10 15
 Lys Leu Pro Gly Asp Thr Thr Ser Val Leu Lys Asn Trp Trp Gln Gln
 20 25 30
 His Ser Lys Trp Pro Tyr Pro Thr Glu Asp Asp Lys Ala Lys Leu Val
 35 40 45
 Glu Glu Thr Gly Leu Gln Leu Lys Gln Ile Asn Asn Trp Phe Ile Asn
 50 55 60
 Gln Arg Lys Arg Asn Trp His Asn Asn Ser Gln Ser Val Thr Ser Leu
 65 70 75 80
 Lys Ser Lys Arg Lys Arg
 85

<210> 696
 <211> 99
 <212> PRT
 <213> Eucalyptus grandis

<400> 696
 Pro Val Asp Ile Thr Gly Met Gln Ala Val Met Thr Gly Cys Asp Ser
 1 5 10 15
 Ser Asn Ile Ala Ala Leu Pro Ser Gly Phe Ser Ile Leu Pro Asp Gly
 20 25 30

Ile Glu Ser Arg Pro Leu Val Ile Ser Ser Arg His Glu Lys Ser
 35 40
 Ser Glu Gly Gly Ser Leu Leu Thr Ile Ala Phe Gln Ile Leu Thr Asn
 50 55 60
 Thr Ser Pro Thr Ala Lys Leu Thr Val Glu Ser Val Glu Ser Val Asn
 65 70 75 80
 Thr Leu Ile Ser Cys Thr Leu Arg Asn Ile Arg Thr Ser Leu Gln Cys
 85 90 95
 Glu Asp Gly

<210> 697
 <211> 134
 <212> PRT
 <213> Eucalyptus grandis

<400> 697
 Glu Asn Lys Ile Asn Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly
 1 5 10 15
 Leu Leu Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val
 20 25 30
 Ala Leu Ile Ile Phe Ser His Arg Gly Lys Leu Tyr Glu Phe Cys Ser
 35 40 45
 Ser Ser Ser Met Leu Lys Thr Leu Glu Arg Tyr Gln Lys Cys Asn Tyr
 50 55 60
 Gly Ala Pro Glu Pro Ser Ile Ser Thr Arg Glu Ala Gln Leu Glu Leu
 65 70 75 80
 Ser Ser Gln Gln Glu Tyr Leu Lys Leu Lys Ala Arg Tyr Glu Ala Leu
 85 90 95
 Gln Arg Thr Gln Arg Asn Leu Leu Gly Glu Glu Leu Gly Pro Leu Ser
 100 105 110
 Ser Lys Glu Leu Glu Ser Leu Glu Arg Gln Leu Asp Ser Ser Leu Lys
 115 120 125
 Gln Ile Arg Ser Thr Arg
 130

<210> 698
 <211> 145
 <212> PRT
 <213> Eucalyptus grandis

<400> 698
 Met Gln Glu Pro Asn Leu Ala Met Met Gly Gly Gly Gly Gly Gly Gly
 1 5 10 15
 Gly Gly Gly Gly Ile Val Gly Gly Gly Gly Gly Leu Gly Ser
 20 25 30
 Glu Ala Ser Phe Ser Gly Asp His Pro Gln Arg Gln Leu Lys Gly Glu
 35 40 45
 Ile Ala Ser His Pro Met Tyr Glu Gln Leu Leu Ser Ala His Val Ala
 50 55 60
 Cys Leu Arg Val Ala Thr Pro Ile Asp Gln Leu Pro Leu Ile Asp Ala
 65 70 75 80
 Gln Leu Ala Gln Ser His His Leu Leu Arg Ser Tyr Ala Ser Ser Val
 85 90 95
 Gln His Gly His Ser Ser Leu Ser Pro His Asp Arg Gln Glu Leu Asp
 100 105 110
 His Phe Leu Ala Gln Tyr Leu Val Val Leu Cys Ser Phe Lys Glu Gln
 115 120 125
 Leu Gln Gln His Val Arg Val His Ala Val Glu Ala Val Met Ala Cys
 130 135 140
 Arg

145

<210> 699
 <211> 160
 <212> PRT
 <213> Eucalyptus grandis

<400> 699
 His Pro Asp Glu Lys Gln Arg Gln Gln Leu Ser Lys Gln Leu Gly Leu
 1 5 10 15
 Ala Pro Arg Gln Val Lys Phe Trp Phe Gln Asn Arg Arg Thr Gln Leu
 20 25 30
 Lys Ala Ile Gln Glu Arg His Glu Asn Ser Leu Leu Lys Thr Glu Met
 35 40 45
 Glu Lys Leu Arg Asp Glu Asn Lys Ala Met Arg Asp Thr Ile Gln Lys
 50 55 60
 Ser Cys Cys Pro Asn Cys Gly Ser Ala Thr Thr Ser Arg Asp Thr Ala
 65 70 75 80
 Leu Thr Thr Gln Glu Gln Gln Leu Arg Ile Glu Asn Ala Arg Leu Lys
 85 90 95
 Ala Glu Val Glu Lys Leu Arg Thr Ala Leu Gly Lys Tyr Thr Pro Gly
 100 105 110
 Thr Ala Ser Pro Ser Cys Ser Ala Gly Asn Asp Gln Glu Asn Arg Ser
 115 120 125
 Ser Leu Asp Phe Tyr Thr Gly Ile Phe Gly Leu Asp Lys Ser Lys Ile
 130 135 140
 Met Glu Leu Val Asn Gln Ala Met Glu Glu Lys Lys Met Ala Thr
 145 150 155 160

<210> 700
 <211> 72
 <212> PRT
 <213> Eucalyptus grandis

<400> 700
 Pro Thr Thr Arg Thr Pro Gly Thr Lys Lys Lys Ser Ser Asn Lys
 1 5 10 15
 Lys Ser Leu Gln Gly Glu Arg Glu Arg Ala Arg Thr Gln Glu Thr Leu
 20 25 30
 Asn Leu Ser Ser Pro Val Ser Ser Lys Arg Ala Arg Glu Lys Glu Arg
 35 40 45
 Glu Arg Glu Arg Glu Arg Glu Gly Val Glu Val Glu Glu Arg
 50 55 60
 Ala Arg Glu Glu Glu Gly Val Tyr
 65 70

<210> 701
 <211> 205
 <212> PRT
 <213> Eucalyptus grandis

<400> 701
 Leu Ile Arg Pro Cys Glu Gly Gly Gly Ala Ile Ile His Ile Val Asp
 1 5 10 15
 His Val Asp Leu Asp Ala Trp Ser Val Pro Glu Val Leu Arg Pro Leu
 20 25 30
 Tyr Glu Ser Ser Lys Ile Leu Ala Gln Lys Met Thr Val Ala Ala Leu
 35 40 45
 Arg His Ile Arg Gln Ile Ala Gln Glu Ser Ser Gly Glu Ile Gln Tyr
 50 55 60
 Gly Gly Ser Arg Gln Pro Ala Val Leu Arg Thr Phe Ser Gln Lys Leu

65					70					75				80
Cys	Arg	Gly	Phe	Asn	Asp	Ala	Val	Asn	Gly	Phe	Val	Asp	Asp	Gly
				85					90				95	Trp
Ser	Val	Leu	Ser	Ser	Asp	Gly	Val	Glu	Asp	Val	Thr	Ile	Ala	Val
				100				105					110	Asn
Ser	Ser	Pro	Asn	Lys	Phe	Leu	Gly	Ser	Gln	Tyr	Asn	Ala	Thr	Ile
				115			120					125		Phe
Pro	Asn	Phe	Gly	Arg	Gly	Val	Leu	Cys	Ala	Lys	Ala	Ser	Met	Leu
				130		135					140			Leu
Gln	Asn	Val	Pro	Pro	Ala	Val	Leu	Val	Arg	Phe	Leu	Arg	Glu	His
				145		150				155				Arg
Ser	Glu	Trp	Ala	Asp	His	Gly	Ile	Asp	Ala	Tyr	Ser	Ala	Ala	Ser
				165				170					175	Leu
Lys	Thr	Ser	Ser	Tyr	Ala	Ile	Pro	Cys	Val	Arg	Pro	Gly	Gly	Pro
				180				185					190	
Ser	Ser	His	Val	Ile	Leu	Pro	Leu	Ala	His	Thr	Val	Glu		
			195				200					205		

<210> 702

<211> 126

<212> PRT

<213> Eucalyptus grandis

<400> 702

Leu	Phe	Glu	His	Phe	Leu	His	Pro	Tyr	Pro	Lys	Asp	Ser	Asp	Lys	Val
1				5					10					15	
Met	Leu	Ala	Lys	Gln	Thr	Gly	Leu	Thr	Arg	Ser	Gln	Val	Ser	Asn	Trp
			20					25					30		
Phe	Ile	Asn	Ala	Arg	Val	Arg	Leu	Trp	Lys	Pro	Met	Val	Glu	Glu	Met
			35				40					45			
Tyr	Thr	Glu	Glu	Ile	Lys	Glu	Gln	Glu	Gln	Asn	Gly	Gly	Gly	Ala	Glu
		50			55					60					
Glu	Lys	Pro	Ser	Lys	Ser	Glu	Arg	Glu	Asp	Ser	Ala	Ser	Lys	Ser	Ser
				70					75					80	
Gly	Leu	Gln	Asp	Lys	Ala	Pro	Asn	Ser	Asn	Glu	Asn	Ser	Thr	Lys	Ser
			85					90					95		
Phe	Lys	Pro	Lys	Glu	Ile	Thr	Ser	Arg	Asn	His	Asp	Thr	Pro	Ala	Ile
			100					105					110		
Ser	Thr	Asn	Ser	Ala	Ser	Ser	Ile	Gly	Gly	Asn	Val	Arg	Ser		
			115				120					125			

<210> 703

<211> 116

<212> PRT

<213> Eucalyptus grandis

<400> 703

Asp	Lys	Leu	Met	Lys	His	Glu	Tyr	Gly	Trp	Val	Phe	Asn	Thr	Pro	Val
1				5					10					15	
Asp	Val	Lys	Gly	Leu	Gly	Leu	His	Asp	Tyr	Tyr	Ser	Ile	Ile	Lys	His
			20					25					30		
Pro	Met	Asp	Leu	Gly	Ser	Val	Lys	Thr	Arg	Leu	Asn	Arg	Asn	Trp	Tyr
			35				40					45			
Lys	Ser	Pro	Lys	Glu	Phe	Ala	Glu	Asp	Val	Arg	Leu	Thr	Phe	Arg	Asn
			50			55				60					
Ala	Met	Thr	Tyr	Asn	Pro	Glu	Gly	Gln	Asp	Val	His	Val	Met	Ala	Glu
			65		70				75					80	
Ile	Leu	Tyr	Lys	Ile	Phe	Glu	Asp	Arg	Trp	Ala	Ile	Ile	Glu	Ser	Asp
			85					90					95		
Tyr	Asn	Arg	Glu	Met	Arg	Phe	Ala	Leu	Asp	Tyr	Asp	Met	Gly	Leu	Pro
			100					105					110		

Thr Pro Thr Ser
115

<210> 704
<211> 116
<212> PRT
<213> Eucalyptus grandis

<400> 704
Pro Ser Tyr Gly Asn Gly Tyr Ser Pro Pro Gln Tyr Gly Asn Gly Pro
1 5 10 15
Ala Tyr His Pro Met Pro Thr Tyr Tyr Pro Met Gly Tyr Arg Ile Cys
20 25 30
Ala Gly Cys Asn Thr Glu Ile Gly His Gly Arg Phe Leu Ser Cys Met
35 40 45
Asn Ala Val Trp His Pro Glu Cys Phe Cys Cys Arg Ala Cys Thr Leu
50 55 60
Pro Ile Ser Asp Tyr Glu Phe Ser Leu Ser Gly Asn Tyr Pro Tyr His
65 70 75 80
Lys Ser Cys Tyr Lys Glu His Tyr His Pro Lys Cys Asp Val Cys Ser
85 90 95
His Phe Ile Pro Thr Asn Leu Ala Gly Leu Ile Glu Tyr Arg Ala His
100 105 110
Pro Phe Trp Ser
115

<210> 705
<211> 96
<212> PRT
<213> Eucalyptus grandis

<400> 705
Thr Trp Pro Glu Asp Ile Cys Ser Val Lys Ser Asp Met Phe Asp Ser
1 5 10 15
Glu Ser Pro His Tyr Thr Asp Ala Ala His Ser Ser Leu Leu Glu Pro
20 25 30
Gly Asp Ser Ser Tyr Ala Phe Glu Pro Asp His Ser Asp Leu Ser Gln
35 40 45
Asp Glu Glu Asp Asn Leu Ser Lys Ser Leu Leu Ser Thr Arg Asn Tyr
50 55 60
Pro Lys Leu Glu Asn Ser Asp Tyr Ala Ile Leu Pro Pro Asn Ser Cys
65 70 75 80
Asn Phe Gly Phe His Ala Glu Asp Pro Ala Phe Trp Pro Trp Ser Tyr
85 90 95

<210> 706
<211> 149
<212> PRT
<213> Eucalyptus grandis

<400> 706
Glu Gly Lys Leu Gly His Ser Asn Ser Ser Asn Ser Leu Asp Asn Gly
1 5 10 15
Lys Tyr Val Arg Tyr Thr Pro Glu Gln Val Glu Ala Leu Glu Arg Leu
20 25 30
Tyr His Glu Cys Pro Lys Pro Ser Ser Leu Arg Arg Gln Gln Leu Ile
35 40 45
Arg Glu Cys Pro Ile Leu Ser Asn Ile Glu Pro Lys Gln Ile Lys Val
50 55 60
Trp Phe Gln Asn Arg Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser
65 70 75 80

```

Arg Leu Gln Ala Val Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu
      85          90
Met Glu Glu Asn Asp Arg Leu Gln Lys Gln Val Ser Gln Leu Val Tyr
      100          105          110
Glu Asn Gly Tyr Phe Arg Gln His Thr Gln Asn Thr Thr Leu Ala Thr
      115          120          125
Lys Asp Thr Ser Cys Glu Ser Val Val Thr Ser Gly Gln His Gln Leu
      130          135          140
Thr Ser Gln His Pro
145

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<210> 707
<211> 134
<212> PRT
<213> Eucalyptus grandis

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<400> 707
Glu Glu Asn Met Gln His Leu Lys Asp Glu Ala Ala Asn Met Met Lys
1      5      10      15
Lys Ile Glu Leu Leu Glu Asp Ser Arg Arg Lys Leu Leu Gly Glu Gly
20      25      30
Leu Gly Ser Cys Ser Ile Glu Glu Leu Gln Gln Ile Glu Gln Leu
35      40      45
Glu Arg Ser Val Ile Ser Ile Arg Ala Arg Lys Thr Gln Val Phe Lys
50      55      60
Glu Gln Ile Asp Lys Leu Lys Glu Lys Glu Lys Met Leu Thr Ala Glu
65      70      75      80
Asn Ala Ile Leu Thr Glu Lys Cys Gly Ile Lys Pro Pro Gln Arg Ala
85      90      95
Asn Glu Cys Arg Asp Ser Pro Leu Leu Arg Glu Ser Thr Pro Ser Ser
100      105      110
Glu Val Glu Thr Gly Leu Phe Ile Gly Pro Pro Glu Thr Arg Ser Arg
115      120      125
Arg Leu Pro Phe Gln Asn
130

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<210> 708
<211> 124
<212> PRT
<213> Eucalyptus grandis

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<400> 708
Asp Lys Asp Pro Lys Arg Pro Val Arg Asp Pro Val Phe Ala Ala Val
1      5      10      15
Pro Asp Lys Phe Val Ala Ser Met Met Lys Arg Cys Gly Leu Ile Leu
20      25      30
Thr Lys Val Met Lys His Lys His Gly Trp Val Phe Asn Thr Pro Val
35      40      45
Asp Ala Val Gly Leu Gly Leu His Asp Tyr His Gln Ile Ile Lys Asn
50      55      60
Pro Met Asp Leu Gly Thr Val Lys Thr Asn Leu Glu Arg Asn Phe Tyr
65      70      75      80
His Ser Pro Gln Glu Phe Ala Ala Asp Val Arg Leu Thr Phe Asn Asn
85      90      95
Ala Leu Thr Tyr Asn Pro Lys Gly His Asp Val His His Met Ala Glu
100      105      110
Thr Leu Leu Val Gln Phe Asp Gln Met Phe Asp Pro
115      120

```

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<210> 709
<211> 126

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65 70 75 80
Met Lys Lys Ile Arg Lys Gly Pro Arg Ser Arg Ser Ser Gln Tyr Arg
 85
Gly Val Thr Phe Tyr Arg Arg Thr
 90 95 100

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<210> 712
<211> 138
<212> PRT
<213> Eucalyptus grandis
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<400> 712															
Asp	Asp	Leu	Asp	Asn	Glu	Arg	Ala	Ser	Ser	Arg	Gly	Gly	Gly	Ser	Asp
1				5				10						15	
Glu	Glu	Asp	Gly	Asp	Met	Ser	Arg	Lys	Lys	Leu	Arg	Leu	Ser	Lys	Asp
			20					25					30		
Gln	Ser	Ala	Val	Leu	Glu	Glu	Ser	Phe	Lys	Glu	His	Asn	Thr	Leu	Asn
			35				40					45			
Pro	Lys	Gln	Lys	Leu	Ala	Leu	Ala	Lys	Gln	Leu	Gly	Leu	Arg	Pro	Arg
	50					55					60				
Gln	Val	Glu	Val	Trp	Phe	Gln	Asn	Arg	Arg	Ala	Arg	Thr	Lys	Leu	Lys
65					70					75				80	
Gln	Thr	Glu	Val	Asp	Cys	Glu	Tyr	Leu	Lys	Arg	Cys	Cys	Glu	Ser	Leu
				85					90					95	
Thr	Glu	Glu	Asn	Arg	Arg	Leu	Gln	Lys	Glu	Val	Gln	Glu	Leu	Arg	Ala
			100					105						110	
Leu	Lys	Leu	Ser	Pro	Gln	Phe	Tyr	Met	His	Leu	Ser	Pro	Pro	Thr	Thr
			115				120					125			
Leu	Thr	Met	Cys	Pro	Ser	Cys	Glu	Arg	Val						
	130						135								

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<210> 713
<211> 128
<212> PRT
<213> Eucalyptus grandis
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<400> 713																	
Glu	Ser	Gln	Lys	Leu	Met	Glu	Ala	Val	Gln	Asn	Gly	Asp	Val	Ser	Ala		
1				5					10					15			
Ala	Val	Asp	Leu	Leu	Asp	Gln	Asp	Pro	Leu	Leu	Leu	Asp	Arg	Ile	Ile		
			20					25					30				
Val	Leu	Gly	Val	Ser	Asp	Thr	Pro	Leu	His	Ala	Ala	Ser	Val	Leu	Gly		
		35					40					45					
His	Ala	Asp	Leu	Val	Arg	Glu	Leu	Leu	Arg	Arg	Ala	Pro	Arg	Leu	Ala		
		50				55					60						
Ser	Glu	Gln	Asp	Ser	Arg	Gly	Asn	Ser	Pro	Leu	His	Leu	Ala	Ala	Gly	Ala	80
65					70					75							
Lys	Gly	His	Gly	Glu	Ile	Val	Gly	Glu	Leu	Leu	Ser	Ala	Asp	Pro	Ala		
			85					90						95			
Ala	Ala	Ser	Ala	Arg	Asn	Leu	Asp	Gly	Arg	Ala	Pro	Ile	His	Val	Ala		
			100					105					110				
Ala	Ile	Lys	Gly	Arg	Val	Asp	Ala	Val	Gly	Arg	Met	Val	Gly	Ala	Val		
		115					120					125					

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<210> 714
<211> 93
<212> PRT
<213> Eucalyptus grandis
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<400> 714
Tyr Ser Gly Tyr Leu Ser Ser Leu Lys Gln Glu Leu Ser Lys Lys Lys

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      1           5           10           15
Lys Lys Gly Lys Leu Pro Lys Glu Ala Arg Gln Lys Leu Ser Trp
      20           25           30
Trp Glu Leu His Tyr Lys Trp Pro Tyr Pro Ser Glu Thr Glu Lys Val
      35           40           45
Ala Leu Ala Glu Ser Thr Gly Leu Asp Gln Lys Gln Ile Asn Asn Trp
      50           55           60
Phe Ile Asn His Val Ile Glu Cys Trp Val Lys Ser Met Ala Thr Leu
      65           70           75           80
Met Gln Glu Ile Phe Leu Met Thr Lys Val Ile Leu Arg
      85           90

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<210> 715
 <211> 127
 <212> PRT
 <213> Eucalyptus grandis

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      <400> 715
Thr Phe Ser Phe Gly Ile Leu Lys Ala Gly Glu Gly Gly Asp Gly Val
      1           5           10           15
Ala Asp Asp Glu Leu Gly Val Thr Arg Gln Leu Phe Pro Val Arg Glu
      20           25           30
Val Asp Ala Asp Met Glu Trp Cys Gly Glu Ser Ser Ser Leu Asp Lys
      35           40           45
Arg Ser Asp Val Phe Leu Val Gly Ala Cys Lys Glu Lys Glu Gly Pro
      50           55           60
Arg Leu Ala Met Pro Gln Gln Arg Arg Lys Ser Arg Arg Gly Pro Arg
      65           70           75           80
Ser Arg Ser Ser Gln Tyr Arg Gly Val Thr Phe Tyr Arg Arg Thr Gly
      85           90           95
Arg Trp Glu Ser His Ile Trp Asp Cys Gly Lys Gln Val Tyr Leu Gly
      100          105          110
Gly Phe Asp Thr Ala His Ala Ala Arg Pro Met Ile Glu Leu
      115          120          125

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<210> 716
 <211> 35
 <212> PRT
 <213> Eucalyptus grandis

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      <400> 716
Ser Glu Asp Met Gln Phe Met Val Met Asp Gly Leu His Pro Gln Gly
      1           5           10           15
Ala Ala Leu Tyr Met Asp Gly His Tyr Ile Gly Asp Gly Pro Tyr Arg
      20           25           30
Leu Gly Pro
      35

```

<210> 717
 <211> 179
 <212> PRT
 <213> Eucalyptus grandis

```

      <400> 717
Ala Ala Phe Glu Gly Met Asp Ser Leu Pro Ser Pro Arg Lys Lys Lys
      1           5           10           15
Asn Gln Leu Val Asn Arg Arg Arg Phe Ser Asp Glu Gln Ile Arg Ser
      20           25           30
Leu Glu Ser Ile Phe Glu Ser Glu Ser Arg Leu Glu Pro Arg Lys Lys
      35           40           45
Leu Gln Leu Ala Arg Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Ile

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      50              55              60
Trp Phe Gln Asn Lys Arg Ala Arg Trp Lys Ser Lys Gln Leu Glu Arg
65              70              75              80
Asp Phe Ala Ile Leu Arg Ala Asn Tyr Asn Ala Leu Tyr Ser Arg Phe
      85              90              95
Glu Ser Leu Lys Lys Glu Lys Gln Ser Leu Val Thr Gln Ile Glu Lys
      100              105              110
Leu Asn Gln Leu Val Glu Lys Pro Gln Gly Glu Gly Gln Ser Cys Gly
      115              120              125
His Asp Leu Ala Thr Asn Ser Thr Asp Arg Glu Ser Asp Asn Gly Val
      130              135              140
Pro Lys Tyr Glu Asp Ser Gln Pro Val Phe Pro Asp Lys Leu Thr Arg
145              150              155              160
Leu Met Gly Ile Pro Cys Glu Asp Asp Tyr Phe Gly Leu Lys Arg Ala
      165              170              175
Glu Pro Pro

```

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<210> 718
<211> 142
<212> PRT
<213> Eucalyptus grandis

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<400> 718
Asn Leu Thr Asp Lys Leu Leu His Lys Gly Asn Glu Lys Glu Ser Ser
1              5              10              15
Glu Ser Ser Ser Lys Ser Ser Gln Gly Leu Phe Gln Asn Pro Ile Ala
      20              25              30
Asp Ser Val Ser Glu Asp Glu Val Ser Arg Val Pro Ile Pro Thr Trp
      35              40              45
Pro Glu Asp Ile Cys Ser Val Lys Ser Asp Met Phe Asp Ser Glu Ser
50              55              60
Pro His Tyr Thr Asp Ala Ala His Ser Ser Leu Leu Glu Pro Gly Asp
65              70              75              80
Ser Ser Tyr Ala Phe Glu Pro Asp His Ser Asp Leu Ser Gln Asp Glu
      85              90              95
Glu Asp Asn Leu Ser Lys Ser Leu Leu Ser Thr Arg Asn Tyr Pro Lys
      100              105              110
Leu Glu Asn Ser Asp Tyr Ala Ile Leu Pro Pro Asn Ser Cys Asn Phe
      115              120              125
Gly Phe His Ala Glu Asp Pro Ala Phe Trp Pro Trp Ser Tyr
130              135              140

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<210> 719
<211> 207
<212> PRT
<213> Eucalyptus grandis

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<400> 719
Glu Lys Arg Thr Pro Lys Lys Arg Gly Arg Lys Pro Gly Leu Gly Arg
1              5              10              15
Asp Thr Pro Leu Asn His Val Glu Ala Glu Arg Gln Arg Arg Glu Lys
      20              25              30
Leu Asn His Arg Phe Tyr Ala Leu Arg Ala Val Val Pro Asn Val Ser
35              40              45
Arg Met Asp Lys Ala Ser Leu Leu Ser Asp Ala Val Ser Tyr Ile Asn
50              55              60
Glu Leu Lys Ser Lys Ile Gly Asp Leu Glu Ser Gln Leu Gln Arg Glu
65              70              75              80
Ser Lys Arg Val Lys Gln Glu Val Thr Asp Ala Thr Asp Asn Leu Ser
      85              90              95

```

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Thr Thr Thr Ser Val Asp His Ser Ser Pro Ser Gly Cys Gly Gly Ser
      100
Leu Leu Glu Val Glu Val Lys Ile Val Gly Cys Asp Ala Met Ile Arg
      115
Val Gln Ser Glu Asn Ala Asn Tyr Pro Ser Ala Arg Leu Met Ala Ala
      130
Met Arg Asp Leu Glu Leu His Ile His His Ala Ser Leu Ser Thr Val
      145
Asn Asp Leu Met Leu Gln Asp Val Val Val Ser Val Pro Glu Gly Leu
      165
Lys Gly Glu Glu Asp Leu Arg Ala Ala Leu Leu Arg Ala Leu Glu Gln
      180
Arg Ser Glu Lys Leu Pro Gly Glu Arg Glu Arg Glu Tyr Val Leu
      195

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<210> 720
 <211> 128
 <212> PRT
 <213> Eucalyptus grandis

```

<400> 720
Glu Asp Asp Lys Leu Gly Arg Asn Arg Ala Ser Ala Asn Val Val Gln
  1      5      10
Ser Ser Ser Val Lys Gly Arg Pro Ser Gly Gly Thr Leu Val Val Cys
      20      25
Pro Thr Ser Val Leu Arg Gln Trp Gly Asp Glu Leu Lys Asn Lys Val
      35      40
Ser Glu Lys Ala Lys Leu Ser Val Cys Met Tyr His Gly Thr Thr Arg
      50      55
Thr Lys Asp Pro Tyr Glu Leu Ala Asn Tyr Asp Val Val Leu Thr Thr
      65      70
Tyr Ser Ile Val Ser Met Glu Val Pro Lys Pro Ala Gly Phe Lys Asp
      85      90
Glu Lys Asp Ser Leu Gln Asp Asp Asp Ala Phe Phe Gly Arg Lys
      100      105
Arg Lys His Ser Ala Lys Ser Glu Lys Arg Arg Leu Lys Lys Glu Met
      115      120

```

<210> 721
 <211> 114
 <212> PRT
 <213> Eucalyptus grandis

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<400> 721
Phe Arg Leu Phe Ile Asn Trp Leu Leu Asp Phe Asn Ser Ala Asp Ser
  1      5      10
Ala Ile Asp Ser Ala His Phe Gln Ile Leu Thr Ala Phe Ala Asn Ala
      20      25
Phe His Ala Leu Gln Pro Leu Lys Val Pro Ala Phe Ser Phe Ala Trp
      35      40
Leu Glu Leu Val Ser His Arg Ser Phe Met Pro Lys Ile Leu Ser Gly
      50      55
Asn Ser Gln Lys Gly Trp Pro Tyr Phe Gln Arg Leu Leu Val Asp Leu
      65      70
Phe Gln Tyr Met Glu Pro Phe Leu Arg Asn Ala Glu Leu Gly Leu Pro
      85      90
Val His Phe Leu Tyr Lys Gly Thr Leu Arg Val Leu Leu Val Leu Leu
      100      105
His Asp

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<210> 722
 <211> 183
 <212> PRT
 <213> Eucalyptus grandis

<400> 722
 Met Asn Arg Glu Arg Leu Met Lys Met Ala Gly Ser Val Arg Thr Gly
 1 5 10 15
 Gly Lys Gly Thr Met Arg Arg Lys Lys Ala Val His Lys Thr Thr
 20 25 30
 Thr Thr Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val
 35 40 45
 Asn Ala Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp Val
 50 55 60
 Val Ile Gln Phe Leu Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn
 65 70 75 80
 Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Lys Leu Gln Asp Ile
 85 90 95
 Leu Pro Gly Ile Ile Asn Gln Leu Gly Pro Asp Asn Leu Asp Asn Leu
 100 105 110
 Arg Lys Leu Ala Glu Gln Phe Gln Lys Gln Val Pro Gly Ala Ala Thr
 115 120 125
 Gly Ser Gly Ala Thr Gly Met Gln Asp Asp Asp Asp Glu Val Pro
 130 135 140
 Glu Leu Val Pro Gly Glu Thr Phe Glu Ala Ala Ala Glu Glu Gly Gln
 145 150 155 160
 Ala Thr Gln Val Thr Glu Ala Thr Gln Val Thr Glu Ala Thr Lys Val
 165 170 175
 Thr Glu Ala Thr Pro Ala Ser
 180

<210> 723
 <211> 54
 <212> PRT
 <213> Eucalyptus grandis

<400> 723
 Gly Ser Cys Gln Lys Gly Asp Ser Cys Glu Tyr Ala His Gly Val Phe
 1 5 10 15
 Glu Ser Trp Leu His Pro Ala Gln Tyr Arg Thr Arg Leu Cys Lys Asp
 20 25 30
 Glu Thr Gly Cys Ala Arg Lys Val Cys Phe Phe Ala His Lys Pro Glu
 35 40 45
 Glu Leu Arg Pro Val Tyr
 50

<210> 724
 <211> 124
 <212> PRT
 <213> Eucalyptus grandis

<400> 724
 Met Ala Ser Ser Ser Gly Thr Ser Ser Gly Ser Thr Leu Ile Gln Asn
 1 5 10 15
 Ser Gly Ser Glu Glu Ser Leu Gln Ala Leu Met Asp Gln Arg Lys Arg
 20 25 30
 Lys Arg Met Ile Ser Asn Arg Glu Ser Ala Arg Arg Ser Arg Met Arg
 35 40 45
 Lys Gln Arg His Leu Asp Asp Leu Met Leu Val Val Ala Gln Leu Arg
 50 55 60
 Lys Asp Asn Gln Gln Leu Arg Asp Asn Val Asn Val Val Asn Gln His


```

65              70              75              80
Tyr Met Thr Leu Glu Thr Glu Asn Ser Ile Leu Arg Val Gln Met Asn
              85              90              95
Glu Leu Thr Asn Arg Leu Glu Ser Leu Lys Asp Ile Leu Gly Ile Leu
              100              105              110
Asp Ala Gly Asp Gly Gly Arg Pro Gly Asn Gly Gly
              115              120

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<210> 725
 <211> 120
 <212> PRT
 <213> Eucalyptus grandis

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<400> 725
Met Thr Asp Gly His Leu Phe Asn Asn Ile Ser Leu Gly Gly Arg Gly
1              5              10              15
Gly Ser Asn Pro Gly Gln Ile Lys Ile Phe Ser Gly Gly Ile Ser Trp
              20              25              30
Arg Arg Gln Gly Gly Gly Lys Ala Val Glu Val Asp Lys Ser Asp Ile
              35              40              45
Val Gly Val Thr Trp Met Lys Val Pro Arg Thr Asn Gln Leu Gly Val
              50              55              60
Arg Thr Lys Asp Gly Leu His Tyr Lys Phe Thr Gly Phe Arg Asp Pro
65              70              75              80
Asp Val Ile Ser Leu Thr Asn Phe Phe Gln Asn Thr Cys Gly Leu Thr
              85              90              95
Pro Glu Glu Lys Gln Leu Ser Val Ser Gly Arg Asn Trp Gly Glu Val
              100              105              110
Asp Leu Ser Gly Asn Met Leu Thr
              115              120

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<210> 726
 <211> 58
 <212> PRT
 <213> Eucalyptus grandis

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<400> 726
Arg Leu Gly Pro Met Gly Pro Lys Thr Leu Cys Asn Ala Cys Gly Ile
1              5              10              15
Arg Tyr Lys Thr Gly Arg Leu Phe Pro Glu Tyr Arg Pro Ser Ala Ser
              20              25              30
Pro Thr Tyr Val Pro Ser Leu Asn Ile Val Ser Asn Glu Ile Pro Ser
              35              40              45
Ser His Leu Trp Leu Ser Leu Leu Gln Lys
              50              55

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<210> 727
 <211> 78
 <212> PRT
 <213> Eucalyptus grandis

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<400> 727
Gly Val Ala Ile Asp Val Lys Ile Met Gly Trp Asp Glu Val Val Arg
1              5              10              15
Val Glu Ser Gly Arg Lys Asp His Pro Ala Ala Arg Leu Met Val Ala
              20              25              30
Leu Gln Glu Leu Asn Leu Glu Leu Gln His Ala Ser Val Ser Val Val
              35              40              45
Asn Glu Leu Met Ile Gln Gln Ala Thr Val Lys Met Gly Ser Gln Leu
              50              55              60
Tyr Thr Gln Glu Gln Leu Lys Ala Ala Leu Leu Ala Val Ile

```

65

70

75

<210> 728
 <211> 123
 <212> PRT
 <213> Eucalyptus grandis

<400> 728
 Lys Pro Pro Met Lys Lys Gln Lys Ser Lys Pro Ala Ala Ala Ser Glu
 1 5 10 15
 Thr Ala Gly Pro Ala Arg Arg Cys Ser His Cys Gly Val Gln Lys Thr
 20 25 30
 Pro Gln Trp Arg Ala Gly Pro Asn Gly Ala Lys Thr Leu Cys Asn Ala
 35 40 45
 Cys Gly Val Arg Phe Lys Ser Gly Arg Leu Tyr Pro Glu Tyr Arg Pro
 50 55 60
 Ala Cys Ser Pro Thr Phe Ser Ser Glu Leu His Ser Asn His His Arg
 65 70 75 80
 Lys Val Leu Glu Met Arg Arg Lys Lys Glu Ser Met Thr Thr Thr Ala
 85 90 95
 Leu Gly Gln Pro Glu Pro Gly Arg Ala Arg Ala Gln Leu Leu Arg Ala
 100 105 110
 Arg Val Gly Ser Ser Trp Arg Pro Arg Glu Ile
 115 120

<210> 729
 <211> 213
 <212> PRT
 <213> Eucalyptus grandis

<400> 729
 Ala Ala Gly Leu Leu Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile
 1 5 10 15
 Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Asn Phe Thr Glu Glu Glu
 20 25 30
 Asp Glu Ile Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser
 35 40 45
 Leu Ile Ala Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn
 50 55 60
 Tyr Trp Asn Thr His Ile Arg Arg Lys Leu Leu Asn Arg Gly Ile Asp
 65 70 75 80
 Pro Ala Thr His Arg Leu Ile Asn Glu Pro Ala Gln Asp His His Asp
 85 90 95
 Glu Pro Thr Ile Ser Phe Ala Ala Asn Ser Lys Glu Ile Lys Glu Met
 100 105 110
 Lys Asn Asn Ala Glu Leu Asn Phe Met Cys Asn Leu Glu Glu Ser Ala
 115 120 125
 Asp Val Ala Ser Ser Ala Arg Glu Arg Cys Pro Asp Leu Asn Leu Glu
 130 135 140
 Leu Gly Ile Ser Pro Pro Ser His Gln Leu His Gln Pro Glu Pro Leu
 145 150 155 160
 Leu Arg Phe Thr Gly Arg Lys Ser Asp Leu Cys Leu Glu Cys Asn Leu
 165 170 175
 Gly Leu Lys Asn Ser Gln Asn Cys Arg Cys Ser Val Gly Val Ile Glu
 180 185 190
 Ser Glu Thr Ser Val Gly Tyr Asp Phe Leu Gly Leu Lys Ala Ser Val
 195 200 205
 Leu Asp Tyr Arg Ser
 210

<210> 730

<211> 61
 <212> PRT
 <213> Eucalyptus grandis

<400> 730
 Met Ser Val Leu Ser Lys Ser Asp Ser Val Glu Ile Arg Glu Val Trp
 1 5 10 15
 Glu Tyr Asn Leu Glu Asp Glu Phe Ser Phe Ile Arg Glu Ile Val Asp
 20 25 30
 Asp Tyr Pro Tyr Ile Ala Met Asp Thr Glu Phe Pro Gly Met Val Leu
 35 40 45
 Arg Pro Val Gly Asn Phe Lys Ser Ser Ser Glu Ser His
 50 55 60

<210> 731
 <211> 94
 <212> PRT
 <213> Eucalyptus grandis

<400> 731
 Met Arg Arg Lys Lys Lys Ala Val His Lys Thr Thr Thr Thr Asp Asp
 1 5 10 15
 Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val Asn Ala Ile Pro
 20 25 30
 Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp Val Val Ile Gln Phe
 35 40 45
 Leu Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn Thr Trp Val Val
 50 55 60
 Ser Gly Ser Pro Gln Thr Lys Lys Leu Gln Asp Ile Leu Pro Gly Ile
 65 70 75 80
 Ile Asn Gln Leu Gly Pro Asp Asn Leu Asp Asn Leu Gly Ser
 85 90

<210> 732
 <211> 103
 <212> PRT
 <213> Eucalyptus grandis

<400> 732
 Tyr Trp Glu Thr Leu Met Phe Phe Gln Ser Glu Glu Leu Leu His Asn
 1 5 10 15
 Ser Cys Val Ser Glu Val Ile Ser Arg Phe Asn Gly Pro Ser Ser Pro
 20 25 30
 Asp Ala Ala Ala Leu Pro Val Ala Ser Lys Ser Ile Asp Leu Glu Arg
 35 40 45
 Asn Arg Arg Lys Lys Leu Asn Glu Arg Leu Phe Ala Leu Arg Ala Leu
 50 55 60
 Val Pro Lys Ile Ser Lys Met Asp Lys Ala Ser Ile Val Lys Asp Ala
 65 70 75 80
 Ile Asp Tyr Ile Gln Asp Leu Arg Glu Gln Glu Gly Arg Ser Glu Pro
 85 90 95
 Arg Ser Gln Ser Ser Asn Leu
 100

<210> 733
 <211> 78
 <212> PRT
 <213> Eucalyptus grandis

<400> 733
 Gly Val Ala Ile Asp Val Lys Ile Met Gly Trp Asp Ala Val Val Arg

```

      1           5           10           15
Val Glu Ser Gly Arg Lys Asp His Pro Ala Ala Arg Leu Met Val Ala
      20
Leu Gln Glu Leu Asn Leu Glu Leu Gln His Ala Ser Val Ser Val Val
      35
Asn Glu Leu Met Ile Gln Gln Ala Thr Val Lys Met Gly Ser Gln Leu
      50
Tyr Thr Gln Glu Gln Leu Lys Ala Ala Leu Leu Ala Val Ile
      65           70           75

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<210> 734
 <211> 122
 <212> PRT
 <213> *Eucalyptus grandis*

```

      <400> 734
Gly Ile Tyr Ser Cys Leu Asn Leu Asp Ala Ser Asn Gly Gly Ser Ser
      1           5           10           15
Ala Ile Asp Pro Ser Ile Ser Ser Ala Ile Leu Asp Asp Phe Cys Thr
      20
Ile Lys Asp Gly Pro Phe Pro Asn Leu Ser Asp Cys Leu Val Gly Asn
      35
Phe Ser Ser Ser Gln Asp Val Gln Ser Gln Ile Thr Ser Ala Ser Leu
      50
Ala Asp Ser Gln Ala Phe Ser Arg Gln Asp Phe Pro Asp Asn Ser Gly
      65           70           75           80
Gly Thr Ser Ser Ser Asn Val Asp Phe Asp Glu Ser Ser Ile Leu Lys
      85           90           95
Asn Ser Thr Trp Gln Gln Gln Val Ala Pro Pro Met Arg Thr Tyr Thr
      100           105           110
Lys Val Gln Lys Ala Gly Ser Val Gly Arg
      115           120

```

<210> 735
 <211> 133
 <212> PRT
 <213> *Eucalyptus grandis*

```

      <400> 735
Met Gly Ser Ser Ala Ser Ser Gln Arg Pro Asp Asn Leu Gln Asp Lys
      1           5           10           15
Val Gly Pro Val Ser Val Ser Asp Glu Glu Trp Lys Lys Arg Leu Thr
      20
Pro Glu Gln Tyr Tyr Val Ala Arg Gln Lys Gly Thr Glu Arg Ala Phe
      35
Thr Gly Glu Tyr Trp Asn Thr Lys Thr Pro Gly Thr Tyr His Cys Val
      50           55           60           65
Cys Cys Asp Thr Pro Leu Phe Glu Ser Asn Thr Lys Phe Asp Ser Gly
      65           70           75           80
Thr Gly Trp Pro Ser Tyr Tyr Gln Pro Ile Gly Asn Asn Val Lys Ser
      85           90           95
Lys Leu Asp Leu Ser Ile Ile Phe Met Pro Arg Gln Glu Val Leu Cys
      100           105           110
Ala Ala Cys Asp Ala His Leu Gly His Ile Phe Asp Asp Gly Pro Pro
      115           120           125
Pro Thr Gly Lys Arg
      130

```

<210> 736
 <211> 163
 <212> PRT

<213> Eucalyptus grandis

<400> 736

```

Met Val Asp Lys Cys Gly Glu Gly Leu Leu Val Ala Val Glu Ala Gln
 1          5          10          15
Lys Ala Val Pro Ala Pro Phe Leu Thr Lys Thr Tyr Gln Leu Val Asp
          20          25          30
Asp Pro Ser Thr Asp His Ile Val Ser Trp Gly Asp Asp Ser Thr
          35          40          45
Phe Val Val Trp Arg Pro Pro Glu Phe Ala Arg Asp Leu Leu Pro Asn
          50          55          60
Tyr Phe Lys His Asn Asn Phe Ser Ser Phe Val Arg Gln Leu Asn Thr
          65          70          75
Tyr Gly Phe Arg Lys Ile Val Pro Asp Arg Trp Glu Phe Ala Asn Glu
          85          90          95
Phe Phe Arg Lys Gly Glu Lys His Leu Leu Cys Glu Ile His Arg Arg
          100          105          110
Lys Thr Ala Gln Pro Gln Leu Thr His His His Pro His Ser Ala Ser
          115          120          125
Pro Leu Ser Gly Pro Thr Pro Ala Phe Phe Pro Phe Pro Ser Arg Leu
          130          135          140
Ser Ile Ser Pro Ser Asp Ser Asp Asp Gln His Ser Ser His Trp Cys
          145          150          155          160
Asp Ser Pro

```

<210> 737

<211> 172

<212> PRT

<213> Eucalyptus grandis

<400> 737

```

Met Ala Leu Glu Ala Leu Ser Ser Pro Thr Ala Pro Ser Ala Pro Phe
 1          5          10          15
Gln Phe Met Lys Asp Ser Ser Pro Ala Ala Ala Ala Ala Ser
          20          25          30
Ser Ser Ser Ser Ala Tyr Asp Leu Pro Leu Ala Glu Pro Trp Ala Lys
          35          40          45
Arg Lys Arg Ser Lys Arg Pro His Asn Pro Pro Ser Glu Asp Glu Tyr
          50          55          60
Leu Ala Leu Cys Leu Ile Met Leu Ala Arg Gly Gly Ala Gly Arg Thr
          65          70          75
Leu Pro Pro Pro Pro Pro Pro Ala Val Ser Ser Glu Ala Ala Lys Val
          85          90          95
Ala Tyr Arg Cys Pro Val Cys Asp Lys Gly Phe Pro Ser Tyr Gln Ala
          100          105          110
Leu Gly Gly His Lys Ala Ser His Arg Lys His Ala Ser Ser Ala Ala
          115          120          125
Ala Ala Ala Gly Gly Asp Asp Gln Pro Thr Thr Ser Ser Thr Ser Ala
          130          135          140
Ala Thr Thr Ser Ser Gly Val Ser Gly Lys Val His Glu Cys Ser Ile
          145          150          155          160
Cys His Lys Ser Phe Pro Thr Gly Gln Ala Leu Gly
          165          170

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<210> 738

<211> 78

<212> PRT

<213> Eucalyptus grandis

<400> 738

```

Ile Ser Ser Ser Arg Trp Pro Arg Gln Glu Thr Leu Thr Leu Leu Glu
 1          5          10          15
Ile Arg Ser Arg Leu Asp Pro Lys Phe Lys Glu Ala Asn Gln Lys Gly
 20          25          30
Pro Leu Trp Asp Glu Val Ser Arg Ile Met Ser Glu Glu His Gly Tyr
 35          40          45
Asn Arg Ser Gly Lys Lys Cys Arg Glu Lys Phe Glu Asn Leu Tyr Lys
 50          55          60
Tyr Tyr Lys Thr Thr Lys Glu Gly Lys Ala Gly Arg Gln Asp
 65          70          75

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<210> 739
 <211> 135
 <212> PRT
 <213> Eucalyptus grandis

```

<400> 739
Met Gly Pro Gln Met Asn Phe Arg Asn Leu Ala Asp Val Pro Ala Ala
 1          5          10          15
Glu Arg Ser Thr Gly Gly Gln Pro Gly Ile Pro Leu Leu Ser Arg Gln
 20          25          30
Ser Ser Val Tyr Ser Leu Thr Phe Asn Glu Phe Gln Asn Thr Trp Ser
 35          40          45
Gly Leu Ser Lys Asp Ile Gly Ser Ile Asn Met Asp Glu Phe Leu Lys
 50          55          60
Asn Ile Trp Thr Ala Glu Glu Ser Gln Leu Gln Leu Gln Asp Met Ala
 65          70          75
Pro Ser Gly Asn Gly Gly Glu Gly Gly Gln Val Gly Asn Leu Leu
 85          90          95
Arg Gln Gly Ser Leu Thr Leu Ser Arg Thr Ile Ser Gln Lys Thr Val
 100          105          110
Asp Glu Val Trp Arg Glu Leu Phe Lys Glu Thr Glu Asp Val Lys Glu
 115          120          125
Gly Ser Arg Glu Gly Gly Asp
 130          135

```

<210> 740
 <211> 49
 <212> PRT
 <213> Eucalyptus grandis

```

<400> 740
Asp Phe Glu Arg Asn Arg Ala Glu Gly Val Asp Ser Ala Arg Phe Ala
 1          5          10          15
Glu Leu Met Ile Ser Ser Gly Leu Leu Cys Asn Asp Ala Val Ile Trp
 20          25          30
Val Thr Phe His Ser Ala Tyr Asp Phe Gly Tyr Leu Val Lys Ile Leu
 35          40          45
Thr

```

<210> 741
 <211> 101
 <212> PRT
 <213> Eucalyptus grandis

```

<400> 741
Met Asn Phe Ser Asp Lys Glu Val Gln Leu Ala Ser Asp His Pro Lys
 1          5          10          15
Lys Pro Ala Gly Arg Lys Lys Phe Arg Glu Thr Arg His Pro Val Tyr
 20          25          30

```

Arg Gly Val Arg Leu Arg Asp Ser Gly Lys Trp Val Cys Glu Val Arg
 35 40
 Glu Pro Lys Lys Lys Ser Arg Ile Trp Leu Gly Thr Phe Pro Thr Val
 50 55 60
 Glu Met Ala Ala Arg Ala His Asp Val Ala Ala Leu Ala Leu Arg Gly
 65 70 75 80
 Gln Ser Ala Cys Leu Asn Phe Ala Asp Ser Ala Trp Arg Leu Pro Lys
 85 90 95
 Pro Ala Ser Thr Asp
 100

<210> 742
 <211> 113
 <212> PRT
 <213> Eucalyptus grandis

<400> 742
 Gly Met Asp Ser Arg Thr Ser Ser Arg Ile Ser Gly Val Thr Leu Gln
 1 5 10 15
 Glu Val Pro Pro Thr Ser Ser Gln Val Pro Glu Ile Pro Pro Ala Leu
 20 25 30
 Gly Ala Ser Ala Asn Asp Pro Ser Ala Val Ser Glu Leu Lys Ala
 35 40 45
 Pro Ser Gln Gly Thr Ala Lys Val Thr Thr Asn Gln Phe Pro Asp Met
 50 55 60
 Gly Met Leu Ala Gly Ala Gln Glu Ser Glu Ala Val Ser Val Asn Gln
 65 70 75 80
 Ala Asp Thr Val Met Thr Gly Ile Ser Gln Thr Gln Asp Met Val Leu
 85 90 95
 Glu Asp Ile Ala Asn Ile Ser Arg Asp Asp Tyr Met Gly Ala Asp Leu
 100 105 110
 His

<210> 743
 <211> 200
 <212> PRT
 <213> Eucalyptus grandis

<400> 743
 Lys Ala Tyr Ala Arg Arg Gln His Ala Trp Leu Thr Gly Ala Asn Glu
 1 5 10 15
 Val Asp Ser Lys Thr Phe Ser Arg Ala Ile Leu Ala Lys Ser Ala Arg
 20 25 30
 Ile Gln Thr Val Val Cys Ile Pro Leu Leu Asp Gly Val Val Glu Phe
 35 40 45
 Gly Thr Thr Glu Arg Val Gln Glu Asp Ile Ser Leu Val Asn His Val
 50 55 60
 Lys Thr Phe Phe Val Asp His His Pro Pro His Pro Pro Lys Pro Ala
 65 70 75 80
 Leu Ser Glu His Ser Thr Ser Asn Pro Ala Ala Thr Ser Ser Gly His
 85 90 95
 His Arg Phe His Ser Pro Pro Val Pro Ser Tyr Ala Pro Ala Asp Pro
 100 105 110
 Pro Ala Ala Ala Asn Gln Gly Asp Glu Glu Glu Glu Asp Asp Asp Asp
 115 120 125
 Asp Glu Glu Glu Gly Glu Ser Asp Ser Glu Ala Glu Thr Gly Arg Gln
 130 135 140
 Gly Ala Ala Ala Ala Ala Gln Asn Pro His Gly Ala Gly Pro Ala Asn
 145 150 155 160
 Asn Ala Glu Pro Ser Glu Phe Glu Met Ser Glu Asp Ile Arg Leu Gly

165
 Ser Pro Asp Asp Gly Ser Asn Asn Leu 170
 180 Asp Ser Asp Phe Pro Met Leu
 Thr Ile Asn Ser Thr Ala Ala Asp
 195 200

<210> 744
 <211> 327
 <212> PRT
 <213> Eucalyptus grandis

<400> 744
 Asp Gly Ser Cys Arg Glu Pro Lys Asp Gly Glu Glu Ser Glu Ala Thr
 1 5 10 15
 Arg Ile Leu Asn Leu Arg Leu Glu Asp Glu Gly Gln Arg Met Arg
 20 25 30
 Lys Arg Val Leu Asp Lys Leu His Thr Val Phe Gly Gly Ser Asp Glu
 35 40 45
 Asp Asn Tyr Ala Leu Gly Leu Asp Arg Val Thr Asp Met Glu Met Phe
 50 55 60
 Phe Leu Ala Ser Met Tyr Phe Leu Phe Pro Ser Gly Glu Gly Gly Pro
 65 70 75 80
 Gly Lys Cys Phe Ala Ser Glu Lys His Val Trp Leu Thr Asp Ala Leu
 85 90 95
 Lys Ser Ser Ser Asp Tyr Cys Val Arg Ser Phe Leu Ala Lys Ser Ala
 100 105 110
 Gly Ile Arg Thr Ile Val Leu Val Pro Thr Asp Val Gly Val Val Glu
 115 120 125
 Leu Gly Ser Val Arg Ser Val Pro Glu Ser Ser Glu Leu Val Gln Thr
 130 135 140
 Ile Arg Leu Ser Phe Ser Thr Asn Ser Phe Met Ser Val Lys Pro Ile
 145 150 155 160
 Ala Ala Leu Pro Met Thr Asn Glu Lys Lys Asp Glu Asn Ala Pro Phe
 165 170 175
 Ser Asn Leu Ala Leu Ala Gly Lys Gly Glu Ala Ile Ser Lys Ile Phe
 180 185 190
 Gly Lys Glu Leu Thr Thr Val Asn Ser Pro Gly His Tyr Arg Glu Lys
 195 200 205
 Leu Ala Val Arg Lys Met Asp Ser Arg Gln Ser Trp Glu Pro His His
 210 215 220
 Asn Gly Ser Lys Leu Pro Phe Ser Thr Pro Arg Asn Gly Thr Gln Asp
 225 230 235 240
 Thr Ser Trp Ala His His Ala His Gly Val Lys Gln Leu Ser Pro Val
 245 250 255
 Glu Phe Tyr Gly Ser Gln Thr Ser Ala Ser Lys Leu Glu Glu Arg Met
 260 265 270
 Asn Ser Gly Arg Asn Asp Phe Gly Leu Asn Arg Tyr Pro Thr Pro Lys
 275 280 285
 Gln Val Gln Met Gln Ile Asp Phe Thr Gly Ala Thr Ser Arg Pro Ser
 290 295 300
 Val Ile Thr Arg Pro Phe Thr Ala Asp Ser Glu His Ser Asp Val Glu
 305 310 315 320
 Ala Ser Cys Lys Glu Glu Gln
 325

<210> 745
 <211> 361
 <212> PRT
 <213> Eucalyptus grandis

<400> 745


```

Met Met Met Met Thr Met Ala Ala Gly Gly Gly Asp His His Ala Arg
1      5      10      15
Ser Thr Pro Thr Val Gln Ile Pro Pro Val Trp Asp Pro Leu Asp Asp
20
Pro Ala Thr Gly Gly Cys Gly Gly Pro Tyr Ser Pro Tyr Ser Pro Tyr
35
Ser Pro Tyr Ser Gly Gly Gly Asn Ala Gly Gly Ala Ala Gly Gly Gly
50
Glu Cys Cys Asn Asp Leu Thr Ala Leu Arg Arg Phe Leu Pro Ser Asn
65
His His Gln Asp Glu Glu Asp Glu Glu Asp Gly Arg Ala Pro Gly Glu
85
Asp Gly Val Leu Gly Cys Asp Glu Phe Arg Met Tyr Glu Phe Lys Val
100
Arg Lys Cys Ala Arg Gly Arg Ser His Asp Trp Thr Glu Cys Pro Tyr
115
Ala His Pro Gly Glu Lys Ala Arg Arg Arg Asp Pro Arg Arg Phe Phe
130
Tyr Ser Gly Thr Ala Cys Pro Asp Phe Arg Lys Gly Ala Cys Lys Lys
145
Gly Asp Thr Cys Glu Phe Ala His Gly Val Phe Glu Cys Trp Leu His
165
Pro Glu Arg Tyr Arg Thr Gln Ala Cys Lys Asp Gly Gln Ser Cys Arg
180
Arg Arg Val Cys Phe Phe Ala His Ser Pro Asp Gln Leu Arg Val Leu
195
Pro Ala His Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln His Ser
210
Pro Lys Ser Ala Thr Asp Ser Glu Phe Gly Ser Tyr Phe Thr Lys Pro Trp Ser
225
Ala Ala Ala Ala Ala Ala Phe Asp Ser Tyr Phe Thr Lys Pro Trp Ser
245
Ala Ser Phe Ile Ser Ser Pro Thr Ser Ile Leu Thr Thr Ser Ser Pro
260
Pro Ile Ser Pro Pro Thr Asn Ser Pro Pro Met Ser Pro Asn Gln Arg
275
Gly Gly Cys Cys Gly Ser Pro Gly Ser Val Ser Glu Leu Val Ala Cys
290
Met Arg Asn Met Gln Ile Ala Lys Met Lys Met Ser Pro Arg Gly Gln
305
Met Gly Gly Ser Leu Phe Gly Ser Pro Leu Arg Pro Gly Cys His Leu
325
Ala Ala Pro Val Thr Pro Arg Ala Glu Ser Ser Pro Arg Tyr Gly Gln
340
Leu Gly Gly Gly Gly Gly Gly Leu
355

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<210> 746

<211> 78

<212> PRT

<213> Eucalyptus grandis

<400> 746

```

Leu Ile Arg Trp Arg Lys His Arg Arg Val Arg Trp Ala Val Gly Ala
1      5      10      15
Thr Arg Ala Ala Ser Arg Ala Arg Ser Ser Gly Gly Val Arg Glu
20
Gln Asp Arg Tyr Leu Pro Ile Ala Asn Ile Ser Arg Ile Met Lys Lys
35
Ala Leu Pro Ala Asn Gly Lys Ile Ala Lys Asp Ala Lys Asp Thr Val
50

```

Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Ile Thr Ser Glu
65 70 75

<210> 747
<211> 278
<212> PRT
<213> Eucalyptus grandis

<400> 747
Met Ala Thr Pro Asp Glu Arg Pro Ser Ser Ser Ser Ser Ala Ala Ser
1 5 10 15
Ala Val Ala Ile Arg Gln Val Trp Ala Trp Asn Leu Asp Ala Glu Phe
20 25 30
Gly Leu Ile Arg Asp Leu Ile Asp Arg Tyr Pro Phe Val Ser Met Asp
35 40 45
Thr Glu Phe Pro Gly Leu Val Phe Arg Arg Pro Ala Gly Ala Gly Ala
50 55 60
Gly Ala Arg Pro Ser Pro Ser Asp His Tyr Arg Leu Leu Lys Ser Asn
65 70 75 80
Val Asp Ala Leu Ser Leu Ile Gln Val Gly Leu Thr Leu Ser Asp Ala
85 90 95
Arg Gly Gly Leu Pro Gly Phe Ile Trp Glu Phe Asn Phe Arg Glu Phe
100 105 110
Asp Ala Ala Arg Asp Pro His Ala Pro Asp Ser Ile Glu Leu Leu Arg
115 120 125
Arg Gln Gly Val Asp Phe Asp Arg Asn Arg Ala Glu Gly Ile Asp Ser
130 135 140
Ala Arg Phe Ala Glu Leu Val Met Ser Ser Gly Leu Val Cys Asn Asp
145 150 155 160
Ala Val Ser Trp Val Thr Phe His Ser Ala Tyr Asp Phe Gly Tyr Leu
165 170 175
Val Lys Ala Leu Thr Arg Arg Glu Leu Pro Gly Asp Leu Pro Glu Phe
180 185 190
Leu Ala Val Val Arg Val Phe Phe Gly Asp Arg Val Tyr Asp Val Lys
195 200 205
His Leu Met Arg Phe Cys His Ser Leu His Gly Gly Leu Asp Arg Val
210 215 220
Ala Ala Ala Leu Glu Leu Asp Arg Ala Val Gly Lys Cys His Gln Ala
225 230 235 240
Gly Ser Asp Ser Leu Leu Thr Trp Gln Ala Phe Arg Lys Ile Arg Asp
245 250 255
Val Tyr Phe Ala Asn Asp Asp Gly Pro Glu Lys His Ala Gly Val Leu
260 265 270
Tyr Gly Leu Glu Val Tyr
275

<210> 748
<211> 31
<212> PRT
<213> Eucalyptus grandis

<400> 748
Met Ala Thr Gly Val Glu Gly Asn Glu Gly Val Pro Ala Asn Leu Arg
1 5 10 15
Lys Gln Leu Ala Val Ala Val Arg Ser Ile Gln Trp Ser Tyr Ala
20 25 30

<210> 749
<211> 229
<212> PRT
<213> Eucalyptus grandis

<400> 749
 Met Asn His Phe Phe Ser Ser Tyr Ser Asp Pro Ser Ser Cys Ser Leu
 1 5 10 15
 Asp Phe Ala Glu Ala Ser Ser Ser Ser Pro Leu Ser Asp Gly Arg
 20 25 30
 Ser Ala Met Val Pro Gly Asn Phe Ser Asp Glu Glu Val Leu Leu Ala
 35 40 45
 Ser His Gln Pro Lys Lys Arg Ala Gly Arg Lys Lys Phe Gln Glu Thr
 50 55 60
 Arg His Pro Val Tyr Arg Gly Val Arg Arg Arg Ser Ser Gly Lys Trp
 65 70 75 80
 Val Cys Glu Val Arg Glu Pro Asn Lys Lys Ser Arg Ile Trp Leu Gly
 85 90 95
 Thr Phe Pro Thr Ala Glu Met Ala Ala Arg Ala His Asp Val Ala Ala
 100 105 110
 Leu Ala Leu Arg Gly Arg Ser Ala Cys Leu Asn Phe Ala Asp Ser Ala
 115 120 125
 Trp Arg Leu Pro Ala Pro Ala Ser Ala Asp Ala Lys Asp Ile Gln Gln
 130 135 140
 Ala Ala Ala Gln Ala Ala Glu Ala Phe Arg Pro Ala Glu Ser Glu Ala
 145 150 155 160
 Glu Asp Val Met Ser Gly Tyr Glu Lys Lys Ser Pro Ser Glu Glu Gly
 165 170 175
 Met Leu Tyr Asp Asp Glu Asp Val Phe Gly Met Pro Gly Leu Leu Thr
 180 185 190
 Asn Met Ala Glu Gly Met Leu Leu Pro Pro Gln Cys Gly Gly Asp
 195 200 205
 Gly Tyr Gly Gly Glu Asp Asp Gly Asn Leu Asp Ala Tyr Val Ser Leu
 210 215 220
 Trp Asn Tyr Ser Met
 225

<210> 750
 <211> 210
 <212> PRT
 <213> Eucalyptus grandis

<400> 750
 Met Pro Ile Arg Ile Gln Asn Leu Pro Lys Lys Asn Phe Asp Gln Gly
 1 5 10 15
 Ser Ser Leu Ser Met Pro His Val Gly Val Thr Tyr Pro Pro Trp Trp
 20 25 30
 Ser Leu Asn Glu Gln Gln Leu Pro Gln Ser Leu Pro Lys Asn Ser Gly
 35 40 45
 Leu Lys Ala Glu Ser Pro Pro Met Leu His His Gln Ala Lys His Leu
 50 55 60
 Gly Leu Gln Leu Gln Glu Gln Glu Ser Ser Ser Thr Gln Ser Ala Gly
 65 70 75 80
 Asn Ser Cys His Glu Val Ser Val Val Gly Gly Ala Asn Ser Gln Asp
 85 90 95
 Gln Ser Ile Ser Ser Glu Ser Gly Gln Asp Glu Ser Cys Gly Arg Ser
 100 105 110
 Phe Glu Gly Gln Thr Lys Pro Ile Phe Met Phe Asn Asn Pro Glu Ile
 115 120 125
 Val Phe Asn Ser Ser Leu Ala Asp Gln Asn Gln Pro Leu Ile Arg Val
 130 135 140
 Pro Tyr Pro Pro Val Asp Pro Tyr Tyr Gly Gly Leu Leu Thr Ala Tyr
 145 150 155 160
 Arg Pro Gln Ala Ile Ile Gln Ser Gln Val Gly Ser Gln Met Phe Gly
 165 170 175

Met Ala Pro Gly Arg Val Pro Leu Pro Leu Asn Leu Ala Asp His Gly
 180 185 190
 Pro Ile Tyr Val Asn Ala Lys Gln Tyr Ser Arg Asn Ser Ser Glu Glu
 195 200 205
 Ala Val
 210

<210> 751
 <211> 93
 <212> PRT
 <213> Eucalyptus grandis

<400> 751
 Gly Tyr Gly Phe Val Arg Phe Gly Asp Glu Thr Glu Gln Leu Arg Ala
 1 5 10 15
 Met Thr Glu Met Asn Gly Met Tyr Cys Ser Ser Arg Pro Met Arg Ile
 20 25 30
 Gly Pro Ala Ala Asn Lys Lys Pro Ile Ala Thr Gln Gln Tyr Gln Ser
 35 40 45
 Ala Ser Tyr Gln Asn Ser Gln Gly Asn Gln Gly Glu Asn Asp Pro Asn
 50 55 60
 Asn Thr Thr Ile Phe Val Gly Gly Leu Asp Pro Ser Val Ser Asp Asp
 65 70 75 80
 Leu Leu Arg Gln Val Phe Ser Gln Tyr Gly Glu Leu His
 85 90

<210> 752
 <211> 97
 <212> PRT
 <213> Eucalyptus grandis

<400> 752
 Gly Tyr Arg Arg Ser Ala Lys Lys Cys Lys Glu Lys Phe Glu Asn Val
 1 5 10 15
 His Lys Tyr Tyr Lys Arg Thr Lys Glu Gly Arg Ala Gly Arg Gln Asp
 20 25 30
 Gly Lys Thr Tyr Lys Phe Phe Ser Glu Leu Glu Ala Leu His Asn Thr
 35 40 45
 Ala Ala Gly Ala Thr Val Gly Ile Ser Ser Ser Phe Lys Trp Trp Trp
 50 55 60
 Cys Cys Phe Trp His Cys Ser Pro Gly Arg Ser Leu Gly Thr Pro Ser
 65 70 75 80
 Phe Asp Arg Asp Ile Val Arg Gln Pro Arg Pro Asn Leu His Cys Pro
 85 90 95
 Arg

<210> 753
 <211> 241
 <212> PRT
 <213> Eucalyptus grandis

<400> 753
 Met Glu Met Glu Asp His His Gln Tyr Thr Ala Ala Asp Leu Arg His
 1 5 10 15
 Leu Ile Asn Ala Arg Pro Pro Pro Pro Pro His Ile Gln Ser Ile
 20 25 30
 Ser Pro Pro Glu Leu Phe Cys Gly Gly Gly His Arg Asn Pro Thr
 35 40 45
 Gln His Leu Glu Ser Met Met Met Gly Gly Gly Gly Leu His Asn Gly
 50 55 60

Gln Arg Gln Gly His Ser His Asn His Gln His His His Gln Phe Gly
 65 70 75 80
 Arg Asp His Ser Ser Pro Ser Ser Val Ala Met Ala Gly Ala Ala Gly
 85 90 95
 Gly Leu Glu Ser Glu Asn Gly Gly Asn Gly Arg Trp Pro Arg Gln Glu
 100 105 110
 Thr Leu Thr Leu Leu Glu Ile Arg Ser Arg Leu Asp Ser Arg Phe Lys
 115 120 125
 Glu Ala Asn Gln Lys Gly Pro Leu Trp Asp Glu Val Ser Arg Ile Met
 130 135 140
 Ser Glu Glu His Gly Tyr Gln Arg Ser Gly Lys Lys Cys Arg Glu Lys
 145 150 155 160
 Phe Glu Asn Leu Tyr Lys Tyr Tyr Lys Thr Lys Glu Gly Lys Ala
 165 170 175
 Gly Arg Gln Asp Gly Lys His Tyr Arg Phe Phe Arg Gln Leu Glu Ala
 180 185 190
 Leu Tyr Gly Glu Asn Ala Asn Ser Asn Ser Ile Leu Gln Ala Pro Ser
 195 200 205
 Leu Pro His Ser Leu His Phe His Pro Pro Pro Asn Ile Asn Asp Ile
 210 215 220
 Asn Gln Asp Ala Ser His His Arg His Pro His Gln Leu Gln Arg Pro
 225 230 235 240
 Cys

<210> 754

<211> 104

<212> PRT

<213> Eucalyptus grandis

<400> 754

Met Glu Arg Gly Asp Pro Asn Val Val Ala Val Ala Arg Leu Arg Arg
 1 5 10 15
 Glu Asp Cys Glu Arg Thr Lys His Asp Ser Ala Phe Ala Thr Trp Lys
 20 25 30
 Val Leu Val Gly Pro Thr Asp Trp Glu Asp Tyr Ser Leu Gly Lys Glu
 35 40 45
 Gly Ala Ala Arg Tyr Arg Val His Asn Leu Pro Lys Ser Pro Gly Pro
 50 55 60
 Gly Ile Tyr Glu Leu Gly Val Ala Ala Ser His Ala Lys Leu Gly Arg
 65 70 75 80
 Glu Ile Ala Lys Leu Asp Pro Arg Tyr Ile Val Val Val Tyr Leu Gly
 85 90 95
 Lys Ala Asp Cys Val Arg Thr Arg
 100

<210> 755

<211> 229

<212> PRT

<213> Eucalyptus grandis

<400> 755

Met Gly Tyr Ala Gln Leu Val Ile Gly Pro Ala Gly Ser Gly Lys Ser
 1 5 10 15
 Thr Tyr Cys Ser Ser Leu Tyr Gln His Cys Glu Ala Ile Gly Arg Thr
 20 25 30
 Ile His Ile Val Asn Leu Asp Pro Ala Ala Glu Asn Phe Asp Tyr Pro
 35 40 45
 Val Ala Met Asp Ile Arg Glu Leu Ile Ser Leu Asp Asp Val Met Glu
 50 55 60
 Glu Leu Gly Leu Gly Pro Asn Gly Gly Leu Met Tyr Cys Met Glu His

```

65          70          75          80
Leu Glu Glu Asn Leu Asp Asp Trp Leu Thr Glu Glu Leu Asp Asn Tyr
      85
Leu Asp Asp Asp Tyr Leu Val Phe Asp Cys Pro Gly Gln Ile Glu Leu
      100
Phe Ser His Val Pro Val Leu Arg Asn Phe Val Glu His Leu Gln Arg
      115
Lys Asn Phe Asn Val Cys Gly Val Tyr Leu Leu Asp Ser Gln Phe Ile
      130
Thr Asp Val Thr Lys Phe Ile Ser Gly Cys Met Ala Ser Leu Ser Ala
      145
Met Val Gln Leu Glu Leu Pro His Val Asn Ile Leu Ser Lys Met Asp
      160
Leu Val Lys Asn Lys Arg Asp Ile Asp Asp Tyr Leu Asn Pro Glu Pro
      175
Arg Val Leu Leu Ser Glu Leu Asn Gln Thr Met Ala Pro Lys Phe Glu
      185
Lys Leu Asn Lys Ala Leu Ala Glu Leu Val Asp Glu Tyr Ser Met Val
      190
Ser Phe Ile Pro Leu
      205
      210
      215
      225

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<210> 756
<211> 81
<212> PRT
<213> Eucalyptus grandis

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<400> 756
Tyr Pro Thr Ile Ile Tyr Arg Pro Tyr Ser Phe Met Ala Lys Ile Ser
1          5          10          15
Ala Val Glu Arg Gly His Phe Leu Thr Val Ile Pro His Phe Ala Trp
      20
Arg Leu Val Asn Pro Ala Thr Leu Lys Tyr Phe Asp Ala Pro His Arg
      35
Pro Met Tyr Met Gln Glu Tyr Leu Tyr Ser Ile Arg Asn His Arg Tyr
      50
Thr Ala Thr Met Leu Gln His Ile Ala Glu Asp Arg Asp Gly Thr Ser
      65
His          70          75          80

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<210> 757
<211> 115
<212> PRT
<213> Eucalyptus grandis

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<400> 757
Met Pro Lys Gly Ser Ser Ile Lys Met Gly Val Pro Leu Gln His Ser
1          5          10          15
Ser Gly Ile Lys Gln Leu Asn Val His Phe Gln Glu Arg Asp Leu Cys
      20
Ser Thr Gln Ser Thr Ser Gln Ser Phe Ser Glu Val Pro Asn Ile Gly
      35
Gly Ser Thr Asp Cys Ser Gln Ala Thr Val Leu Glu Gln Thr Glu His
      50
Gly Glu Thr Glu Gly Gln Ser Val Arg Gly Gln Ala Lys Ser Ala Leu
      65
Ser Met Gly Thr Gln Asp Leu Val Phe Gln Pro Leu Glu Val Cys Ile
      80
Pro Leu His Tyr Ala Glu Pro Ser Leu Gly Gly Phe Met Pro Ala Ala
      85
      90
      95
      100
      105
      110

```

Tyr Gly Pro
115

<210> 758
<211> 356
<212> PRT
<213> Eucalyptus grandis

<400> 758
Met Lys Glu Arg Gln Arg Trp Arg Ala Glu Glu Asp Ala Leu Leu Arg
1 5 10 15
Ala Tyr Val Lys Gln Tyr Gly Pro Arg Glu Trp His Leu Val Ser Gln
20 25 30
Arg Met Asn Thr Pro Leu Asn Arg Asp Ala Lys Ser Cys Leu Glu Arg
35 40 45
Trp Lys Asn Tyr Leu Lys Pro Gly Ile Lys Lys Gly Ser Leu Ser Glu
50 55 60
Glu Glu Gln Arg Leu Val Ile Gln Leu Gln Ala Lys His Gly Asn Lys
65 70 75 80
Trp Lys Lys Ile Ala Ala Glu Ile Pro Gly Arg Thr Ala Lys Arg Leu
85 90 95
Gly Lys Trp Trp Glu Val Phe Lys Glu Lys Gln Gln Arg Glu Gln Lys
100 105 110
Glu Asn Lys Gly Ala Leu Pro Ile Asp Glu Gly Lys Tyr Asp His Ile
115 120 125
Leu Glu Asn Phe Ala Glu Lys Leu Val Lys Glu Arg Ser Thr Pro Ala
130 135 140
Leu Leu Met Ala Thr Ala Asn Gly Gly Phe Ile His Thr Asp Ser Pro
145 150 155 160
Ala Leu Ala Pro Thr Leu Leu Pro Pro Trp Leu Ser Asn Ser Asn Gly
165 170 175
Thr Pro Thr Leu Arg Pro Pro Ser Pro Ser Val Thr Leu Ser Leu Ser
180 185 190
Pro Ala Thr Val Pro Ala Ser Gln Pro Ile Pro Trp Leu Gln Ala Asp
195 200 205
Arg Gly Leu Asp Ser Gly Ser Leu Ser Leu Thr Gly Leu Pro Asn His
210 215 220
Gly Pro Leu Pro Thr Ser Gly Glu Asn Ile Leu Met Ser Glu Leu Ala
225 230 235 240
Glu Cys Cys Lys Glu Leu Glu Glu Gly His Arg Ala Trp Ala Ala His
245 250 255
Lys Lys Glu Ala Ala Trp Arg Leu Lys Arg Leu Glu Leu Gln Leu Glu
260 265 270
Ser Glu Lys Ala Cys Arg Arg Arg Glu Lys Met Glu Glu Ile Glu Ala
275 280 285
Lys Ile Asn Thr Leu Arg Glu Glu Gln Lys Ala Ser Leu Asp Lys Ile
290 295 300
Glu Thr Glu Tyr Arg Glu Gln Leu Ala Gly Leu Arg Lys Asp Ala Glu
305 310 315 320
Ser Lys Glu Gln Lys Leu Ala Glu Gln Trp Thr Ala Lys His Val Gln
325 330 335
Leu Ser Lys Leu Ile Glu Gln Ile Gly Phe Arg Pro Arg Ile Ala Asp
340 345 350
His Asp Arg Gln
355

<210> 759
<211> 93
<212> PRT
<213> Eucalyptus grandis

<400> 759

Gly Leu Asp Ser Cys Ser Val Glu Glu Leu Gln Gln Thr Glu Asn Gln
 1 5 10 15
 Leu Glu Arg Ser Leu Thr Lys Ile Arg Ala Arg Lys Asn His Leu Ile
 20 25 30
 Arg Glu His Ile Glu Arg Leu Lys Ala Glu Glu Arg Lys Leu Leu Glu
 35 40 45
 Glu Lys Arg Lys Leu Leu Gln Glu Ile Glu Cys Gly Lys Gly Leu Thr
 50 55 60
 Pro Val Ser Ser Glu Pro Pro Arg Glu Glu Ile Arg Ala Glu Ser Met
 65 70 75 80
 Asp Val Glu Thr Glu Leu Phe Ile Gly Pro Pro Lys Arg
 85 90

<210> 760

<211> 70

<212> PRT

<213> Eucalyptus grandis

<400> 760

Glu Asp Pro Val Gly Arg Pro Glu Ser Ala Ser Glu Ile Ser Gln Glu
 1 5 10 15
 Pro Gly Gln Glu Phe Met Asp Glu Asp Glu Leu Leu Asn Met Pro Lys
 20 25 30
 Leu Leu Asp Asp Met Ala Glu Gly Met Leu Val Ser Pro Pro Arg Thr
 35 40 45
 Gln Met Ala Ser Glu Asn Asp Ser Pro Glu Asp Ser Asp Gly Gly Glu
 50 55 60
 Ser Leu Trp Ser Tyr Pro
 65 70

<210> 761

<211> 243

<212> PRT

<213> Eucalyptus grandis

<400> 761

Met Cys Gly Gly Ala Ile Ile Ser Asp Phe Val Glu Glu Arg Leu Asp
 1 5 10 15
 Arg Arg Arg Pro Gly Ser Cys Arg Pro Glu Arg Lys Leu Thr Pro His
 20 25 30
 Glu Leu Trp Ser Glu Leu Asp Pro Ala Ser Asp Leu Leu Ser Leu Asp
 35 40 45
 Gly Pro Val Ala Gln Gly His Pro Asn Pro Phe Ser Leu Val Ala Asn
 50 55 60
 Gln Leu Asn Gln Val Met Lys Ser Glu Glu Lys Asn Ser Glu Glu Ala
 65 70 75 80
 Gly His Gly His Val Ser Glu Thr Gln Lys Ser Gln Ser Asn Gly Arg
 85 90 95
 Ser Gln Arg Ala Arg Lys Asn Val Tyr Arg Gly Ile Arg Gln Arg Pro
 100 105 110
 Trp Gly Lys Trp Ala Ala Glu Ile Arg Asp Pro His Lys Gly Val Arg
 115 120 125
 Val Trp Leu Gly Thr Phe Lys Thr Ala Glu Glu Ala Ala Arg Ala Tyr
 130 135 140
 Asp Glu Ala Ala Lys Arg Ile Arg Gly Asp Lys Ala Lys Leu Asn Phe
 145 150 155 160
 Ser Gly Pro Ala Pro Ala Gln Pro Ser Ala Lys Lys Arg Cys Val
 165 170 175
 Ala Pro Asp Glu Pro Lys Asp Glu Ala Gly Ala Ala Gly Cys Glu Leu
 180 185 190


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Lys Glu Arg Ile Ala Ser Leu Glu Ser Phe Leu Glu Leu Glu Pro Thr
    195                200                205
Glu Glu Pro Leu Glu Pro Gly Thr Gly Pro Ser Pro Ala Asp Leu Trp
    210                215                220
Met Leu Glu Asp Leu Val Thr His His Gln His Arg Phe Asp Asn Gln
    225                230                235                240
Leu Val Tyr

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<210> 762
<211> 125
<212> PRT
<213> Eucalyptus grandis

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<400> 762
Gln Gln Arg Leu Leu Gln Tyr Trp Ser Asp Ala Leu Asn Leu Ser Pro
 1          5          10          15
Arg Gly Arg Met Met Met Asn Arg Leu Gly Pro Asp Gly Arg Pro
    20          25          30
Ile Phe Arg Pro Pro Gln Pro Ile Asn Thr Thr Lys Leu Tyr Arg Gly
    35          40          45
Val Arg Gln Arg His Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro
    50          55          60
Arg Asn Arg Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Asp
    65          70          75          80
Ala Ala Leu Ala Tyr Asp Arg Glu Ala Phe Lys Leu Arg Gly Glu Asn
    85          90          95
Ala Arg Leu Asn Phe Pro Glu Leu Phe Leu Asn Lys Asp Lys Ala Glu
    100          105          110
Glu Ser Ala Gly Pro Ser Ser Ser Ser Ser Ser Pro Pro
    115          120          125

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<210> 763
<211> 141
<212> PRT
<213> Eucalyptus grandis

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<400> 763
Ser Ile Pro Ser Val Gly Leu Leu Val Gln Tyr Lys Leu Leu Asn Pro
 1          5          10          15
Ala Ser Ser Tyr Ser Ser Cys Ile Met Ile Gln Asp Met Ser Gln Gly
    20          25          30
Phe Arg Lys Ile Asp Thr Asp Arg Trp Glu Phe Ala Asn Arg Gly Phe
    35          40          45
Gln Glu Gly Lys Lys His Leu Leu Lys Asn Ile Arg Arg Arg Lys
    50          55          60
Leu Ser Asp His Arg Thr Thr Ser Ser Ser Thr Val Ala Ser Asp Tyr
    65          70          75          80
Pro Glu Ala Gly Lys Glu Ala Glu Leu Glu Met Leu Lys Arg Asp Gln
    85          90          95
Glu Ala Leu Lys Ala Glu Ile Leu Lys Leu Arg Glu Glu Arg Glu Asn
    100          105          110
Ser Gln His Glu Ile Asn Gln Val Ile Glu Arg Phe Arg Tyr Ala Glu
    115          120          125
Cys Arg Cys Arg Arg Met Phe Leu Phe Leu Ser Lys Ala
    130          135          140

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<210> 764
<211> 202
<212> PRT
<213> Eucalyptus grandis

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<400> 764
 Lys His Leu Leu Asn Asn Ile Tyr Arg Arg Lys Pro Ile His Ser His
 1 5 10 15
 Ser Gly Gln Gly Ala Arg Leu Ser Asp Ser Glu Lys Gln Met Tyr Glu
 20 25 30
 Glu Glu Ile Lys Arg Leu Arg His Glu Lys Ser Ser Leu Gln Leu Glu
 35 40 45
 Leu Gln Arg Tyr Gln Gly Asp Asn Gln Asp Val Asp Phe Gln Ile Gln
 50 55 60
 Leu Leu Arg Lys Gln Phe Gln Asn Met Glu Gln Lys Gln Thr His Leu
 65 70 75 80
 Ile Thr Val Leu Ala Gln Leu Met Gln Lys Pro Val Phe Ala Ser Leu
 85 90 95
 Phe Thr Gln Gln Ser Asp Ser Pro Thr Lys Lys Arg Arg Leu Ala Glu
 100 105 110
 Leu Asp His Leu His Asp Ser Asp Asp Lys Ser Gly Leu Glu Ser Leu
 115 120 125
 Lys Phe Gln Lys Glu Lys Phe Asn Gly Val Pro Phe Ser Leu Leu Asp
 130 135 140
 Leu Asp Ser Val Glu Lys Leu Glu Gln Ser Leu His Phe Leu Glu Asn
 145 150 155 160
 Leu Leu Gln Gly Val Asp Asn Thr Ser Gly Ala Glu Gln His Asp Phe
 165 170 175
 Gly Ala Ile Ser Leu Pro Trp Pro Ala Gly Phe Thr Glu Arg Lys Glu
 180 185 190
 Ser Leu Asp Asp Ser Asp Arg His Ile His
 195 200

<210> 765
 <211> 175
 <212> PRT
 <213> Eucalyptus grandis

<400> 765
 Met Gln Pro Lys Ser Lys Ile Ser Asn Gly Val Asp Ala His Pro His
 1 5 10 15
 Ser Ile Gln Thr Ser Ala Val Phe Thr Glu Pro Trp Trp Arg Gly Tyr
 20 25 30
 Asn Thr Ile Ser Pro Ala Asp Pro Gly Arg Asn Glu Thr His Ala Pro
 35 40 45
 Leu Gly Cys Ile Asn Gly Gly Ser Glu Ser Asn Gly Gly Gln Ser Gln
 50 55 60
 Ser Asn Glu Glu Arg Val Glu Glu Asp Asp Asp Asp Asn Val Lys
 65 70 75 80
 Gly Ser Gly Asn Pro Ala Cys Ser Gly Ala Val Gly Asn Gln Gly Gln
 85 90 95
 Gly Pro Gln Asn Gly His Gly Ala Pro Thr Ile Ile Thr Met Arg Asp
 100 105 110
 Asp Gly Leu Ala Gln Pro Pro Gln Leu Glu Leu Val Gly His Thr Ile
 115 120 125
 Ala Cys Ala Ser Asn Pro Tyr Gln Asp Pro Tyr Tyr Gly Gly Leu Met
 130 135 140
 Ala Gln Tyr Gly His Gln Ser Met Ala Tyr Pro Phe Val Gly Ile Pro
 145 150 155 160
 His Ala Arg Met Pro Leu Pro Leu Asp Leu Ala Gln Glu Pro Cys
 165 170 175

<210> 766
 <211> 190
 <212> PRT

<213> Eucalyptus grandis

<400> 766

```

Thr Gly Ala Asn Glu Lys Asp Ser Val Met Glu Ile Thr Phe His Val
1      5      10
Pro Asn Ser Asn Thr Gln Phe Val Gly Asp Glu Asn Arg Pro Pro Ala
20     25     30
Gln Val Phe Arg Asp Arg Ile Met Ser Val Ala Asp Val Gly Ala Gly
35     40     45
Gly Glu Asp Ala Val Val Thr Phe Glu Gly Ile Ala Ile Leu Thr Pro
50     55     60
Arg Gly Arg Tyr Ser Val Glu Leu His Leu Ser Phe Leu Arg Leu Gln
65     70     75
Gly Gln Ala Asn Asp Phe Lys Ile Gln Tyr Ser Ser Val Val Arg Leu
85     90     95
Phe Leu Leu Pro Lys Ser Asn Gln Pro His Thr Phe Val Ile Ile Thr
100    105   110
Leu Asp Pro Pro Ile Arg Lys Gly Gln Thr Leu Tyr Pro His Ile Val
115    120   125
Met Gln Phe Glu Thr Asp Tyr Val Val Gln Ser Thr Leu Ser Met Asn
130    135   140
Asp Asp Leu Phe Asn Thr Lys Tyr Lys Asp Lys Leu Glu Pro Ser Tyr
145    150   155
Lys Gly Leu Ile His Glu Val Phe Thr Thr Ile Leu Arg Gly Leu Ser
165    170   175
Gly Ala Lys Val Thr Lys Pro Gly Lys Phe Arg Ser Ser Gln
180    185   190

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<210> 767

<211> 251

<212> PRT

<213> Eucalyptus grandis

<400> 767

```

Leu Glu Thr Ser Gly Asn Arg Leu Ala Arg Ala Ile Ser Asp Ala Asp
1      5      10
Thr Ser Ser Ala Ala Leu Met Asp Met Leu Glu Gln Met Val Ser
20     25     30
Val Met Gly Asp Pro Ile Gln Arg Leu Gly Ala Tyr Leu Leu Glu Gly
35     40     45
Leu Arg Ala Lys Leu Lys Phe Ser Gly Ser Ile Ile Tyr Arg Lys Leu
50     55     60
Lys Cys Glu Glu Pro Thr Ser Ser Glu Leu Leu Thr Asn Met Gln Val
65     70     75
Leu Tyr Gln Ile Cys Pro Tyr Trp Lys Phe Ala Tyr Val Ser Thr Asn
85     90     95
Val Ile Ile Thr Lys Ala Met Glu Asn Glu Gln Arg Ile His Ile Val
100    105   110
Asp Phe Gln Ile Thr Gln Gly Ser Gln Trp Val Thr Phe Ile Gln Ala
115    120   125
Leu Ala Gln Arg Pro Gly Gly Pro Pro Leu Leu Arg Ile Thr Gly Ile
130    135   140
Asp Asp Ser Asp Ser Val His Ala Arg Gly Ala Gly Leu Glu Ile Val
145    150   155
Gly Gln Lys Leu Ser Glu Ile Ala Glu Ser Cys Asn Val Pro Phe Glu
165    170   175
Phe His Asp Ala Ala Val Ser Leu Ser Glu Val Glu Leu Gln Asn Leu
180    185   190
Met Ile Arg Pro Gly Asp Ala Leu Ala Val Asn Cys Pro Tyr Ile Leu
195    200   205
His His Ile Pro Asp Glu Ser Val Ser Thr Gln Asn His Arg Asp Arg

```

210					215					220					
Val	Leu	Arg	Leu	Ile	Lys	Ser	Leu	Ser	Pro	Arg	Val	Val	Thr	Leu	Val
225					230					235					240
Glu	Gln	Glu	Ser	Asn	Thr	Asn	Thr	Ser	Ser	Phe					
				245					250						

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<210> 768
<211> 174
<212> PRT
<213> Eucalyptus grandis
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<400> 768																	
Gly	Asn	Trp	Asp	Glu	Pro	Thr	Lys	Glu	Glu	Val	Asn	Glu	Pro	Ala	Asp		
1				5				10						15			
Ile	Ala	Glu	Ala	Lys	Thr	Val	Ser	Asp	Ser	Glu	Glu	Ala	Lys	Pro	Asn		
			20					25					30				
Ala	Lys	Arg	Gly	Gln	Pro	Glu	Lys	Glu	Ala	Ser	Glu	Lys	Glu	Ala	Ser		
		35					40					45					
Lys	Lys	Glu	Pro	Asn	Lys	Pro	Pro	Asn	Ser	Trp	Phe	Asp	Leu	Lys	Val		
	50					55					60						
Asn	Thr	His	Val	Tyr	Val	Thr	Gly	Leu	Pro	Glu	Asp	Val	Thr	Met	Glu		
65					70					75					80		
Glu	Val	Val	Glu	Val	Phe	Ser	Lys	Cys	Gly	Ile	Leu	Lys	Glu	Asp	Pro		
				85					90					95			
Glu	Thr	Lys	Lys	Pro	Arg	Val	Lys	Ile	Tyr	Val	Asp	Lys	Glu	Thr	Gly		
			100					105					110				
Arg	Lys	Lys	Gly	Asp	Ala	Leu	Val	Thr	Tyr	Leu	Lys	Glu	Pro	Ser	Val		
		115					120					125					
Ala	Leu	Ala	Ile	Gln	Ile	Leu	Asp	Gly	Ala	Pro	Phe	Arg	Pro	Gly	Gly		
	130					135				140							
Lys	Val	Pro	Met	Ser	Val	Ser	Gln	Ala	Lys	Phe	Glu	Gln	Lys	Gly	Asp		
145					150					155					160		
Lys	Phe	Ile	Ser	Lys	Gln	Val	Asp	Gly	Lys	Lys	Lys	Arg	Asn				
			165					170									

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<210> 769
<211> 218
<212> PRT
<213> Eucalyptus grandis
```

Thr	Phe	Glu	Gln	Leu	Leu	Leu	Pro	Phe	Leu	Tyr	Glu	Leu	Gln	Ile	Leu
1				5					10					15	
Ile	Asp	Leu	Ser	Asn	Asp	Lys	Ala	Thr	Val	Leu	Thr	Asp	Lys	Ile	Gln
			20					25					30		
Val	Leu	Lys	Asp	Leu	Thr	Thr	Glu	Val	Asn	Lys	Leu	Lys	Ala	Glu	Cys
		35					40					45			
Ala	Ala	Leu	Ile	Glu	Glu	Ser	Arg	Glu	Glu	Lys	Asn	Glu	Leu	Arg	Glu
	50					55					60				
Glu	Lys	Ser	Ser	Leu	Lys	Ser	Glu	Val	Glu	Asn	Leu	Asn	Val	Gln	Tyr
65					70					75				80	
Gln	Gln	Arg	Thr	Arg	Val	Met	Tyr	Pro	Trp	Ala	Ala	Met	Asp	Pro	Ser
				85					90					95	
Val	Val	Met	Gly	Pro	Ala	Tyr	Ser	Tyr	Pro	Gly	Pro	Ile	Pro	Val	Thr
			100					105					110		
Pro	Gly	Pro	Ile	Pro	Met	Leu	Ser	Gln	Leu	Gln	Pro	Phe	Pro	Phe	Phe
		115					120					125			
Gly	Asn	Gln	Asn	Ala	Ser	Ala	Ile	Pro	Ala	Pro	Cys	Ser	Thr	Phe	Ile
	130					135					140				
Pro	Asn	Ser	Met	Pro	Ala	Asn	Pro	Thr	Phe	Glu	Gln	Gln	Ser	Thr	Gln
145					150					155					160

Tyr Ala Ser Thr Ser His Val Ser Asn Lys Lys Asp Ser Lys Ser Arg
 165 170 175
 Ser Ser Asp His Gln Arg Gly Ser Ile Ala Glu Gln Asp Glu Asp Ser
 180 185 190
 Asn Asn Val Ala Thr Asp Leu Glu Leu Lys Met Pro Gly Thr Ser Ser
 195 200 205
 His Gln Asp Leu Thr Ser Gly Glu Lys Lys
 210 215

<210> 770
 <211> 188
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 770
 His Pro Met Lys Pro Glu Ser Val Glu Val Leu Asn Phe Gly Asp Ser
 1 5 10 15
 Gly Ser Gly Arg Leu Ser Ser His Ser Gln Val Ala Val Ala Glu
 20 25 30
 Glu Pro Leu Asn His Val Glu Ala Glu Arg Gln Arg Arg Glu Lys Leu
 35 40 45
 Asn Gln Arg Phe Tyr Ala Leu Arg Ala Val Val Pro Asn Val Ser Lys
 50 55 60
 Met Asp Lys Ala Ser Leu Leu Gln Asp Ala Glu Ser Tyr Ile Arg Glu
 65 70 75 80
 Leu Asn Met Asn Leu Gln Ala Ala Glu Ser Asp Lys Glu Asp Leu Lys
 85 90 95
 Lys Gln Leu Asp Glu Leu Lys Lys Arg Ser Ser Asp Lys Glu Cys Ile
 100 105 110
 Pro Val Asp Gln Asp Arg Lys Met Ala Lys Pro Thr Gly Ser Arg Ser
 115 120 125
 Thr Gly Val Ala Ile Asp Val Lys Ile Met Gly Trp Asp Ala Val Val
 130 135 140
 Arg Val Glu Ser Gly Arg Lys Asp His Pro Ala Ala Arg Leu Met Val
 145 150 155 160
 Ala Leu Gln Glu Leu Asn Leu Glu Leu Gln His Ala Ser Val Ser Val
 165 170 175
 Val Asn Glu Leu Met Ile Gln Gln Ala Thr Val Lys
 180 185

<210> 771
 <211> 157
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 771
 Met Met Leu Gly Glu Pro His Arg Pro Pro Asn Pro Thr Ile Asp Val
 1 5 10 15
 Pro Pro Trp Pro Ile Leu Asp Asp Pro Thr Asp Asp Ala Val Pro His
 20 25 30
 Ser Pro Tyr Ser Pro Tyr Thr Leu Asn Ala Gly Tyr Gly Gly Cys
 35 40 45
 Asp Ser Ser Pro Ser Ala Ala Gly Pro Gly His Phe Gln Asp Val Met
 50 55 60
 Ala Ala Leu Arg Arg Phe Leu Pro Ser Asn Arg Pro Asp Thr Asp Pro
 65 70 75 80
 Asp Pro Asp Met Thr Ser Ser Arg Glu Ala Asp Phe Pro Met Asp Val
 85 90 95
 Tyr Ser Cys Asp Asn Phe Arg Met Tyr Glu Phe Lys Val Arg Arg Cys
 100 105 110
 Ala Arg Gly Arg Ser His Asp Trp Thr Glu Cys Pro Tyr Ala His Pro

[illegible]

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<210> 772
<211> 129
<212> PRT
<213> Eucalyptus grandis
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[illegible]

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<210> 773
<211> 149
<212> PRT
<213> Eucalyptus grandis
```

[illegible]

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<210> 774
<211> 175
<212> PRT
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<213> Eucalyptus grandis

<400> 774

```

Met Val Lys Arg Asp Arg Glu Asp Thr Glu Val Glu Ala Leu Ala Arg
 1          5          10          15
Ala Asn Cys Leu Met Leu Leu Ser Arg Val Gly Glu Ser Thr Asp Ser
          20          25          30
Ala Ser Pro Asp Arg Lys Ser Arg Pro Thr Glu Arg Met Phe Ala Cys
          35          40          45
Lys Thr Cys Asn Arg Glu Phe Ser Ser Phe Gln Ala Leu Gly Gly His
 50          55          60          65
Lys Ala Ser His Lys Lys Pro Lys Leu Ile Ser Gly Asp Leu Phe His
          70          75          80
Leu Gly His Ala Ala Asp Ser Ser Pro Ala Lys Pro Lys Thr His Glu
          85          90          95
Cys Ser Ile Cys Gly Leu Asp Phe Pro Met Gly Gln Ala Leu Gly Gly
          100          105          110
His Met Arg Arg His Arg Ala Ala Met Leu Glu Ser Leu Ala Ala Ala
          115          120          125
Ala Ala Lys Pro Val Pro Val Leu Lys Lys Ser Asn Ser Lys Arg Val
          130          135          140
Thr Gly Leu Asp Leu Asn Ser Leu Pro Met Glu Asp Asp Leu Thr Leu
          145          150          155
Arg Leu Gly Lys Val Ala Pro Pro Leu Val Leu Asp Leu Val Leu
          160          165          170          175

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<210> 775

<211> 154

<212> PRT

<213> Eucalyptus grandis

<400> 775

```

Pro Asp Ala Ala Gly Glu Arg Leu Gly His Gly Asp Gln Glu Glu Pro
 1          5          10          15
Leu Gly Val Gly Gly Val Gly Leu Pro Gly Arg Ala Tyr Phe Ser Ser
          20          25          30
Asn Pro Ala Trp Val Thr Gly Ala Glu Arg Leu Gly Asn Cys Gly Cys
          35          40          45
Asp Arg Ala Arg Gln Ala Gln Ile Phe Gly Leu Gln Thr Ile Ala Cys
          50          55          60          65
Val Pro Val Leu Asn Gly Val Val Glu Leu Gly Ser Thr Glu Pro Ile
          70          75          80
Tyr Gln Ser Ser Asp Leu Ile Ser Gly Ile Arg Gly Leu Phe Asn Phe
          85          90          95
His Glu Ser Glu Met Gly Cys Gly Gly Arg Val Leu Asn Ser Glu His
          100          105          110
Asp Pro Ala Ser Leu Trp Ile Cys Asp Pro Pro Val Thr Met Glu Ile
          115          120          125
Asn Asn Arg Pro Met Thr Phe Gln Ile Glu Asn Pro Ser Ser Ser Ser
          130          135          140
Leu Thr Glu Ser Pro Ser Ala Ile Cys Ala
          145          150

```

<210> 776

<211> 177

<212> PRT

<213> Eucalyptus grandis

<400> 776

```

Leu Gly Thr Gln Ile Pro Ser Gly Ile His Met Pro Ser Ala Asn Leu
 1          5          10          15

```

Ser Ser Ile Ser Ile Leu Gly Pro Ile Pro Met Val Ser Gly Asp Gly
 20 25 30
 Gly Gly Arg Thr Gly Ser Glu Arg Ser Arg Asn Ala Asp Cys Ala Pro
 35 40 45
 Ala Gly Phe Pro Gly Gly Asp Glu Asp Val Asn Lys Gly Gly Asp Ile
 50 55 60
 Pro Tyr Gly Met Ser Thr Ile Val Arg Val Ile Pro Asn Ser Arg Tyr
 65 70 75 80
 Leu Arg Val Ala Gln Gln Leu Leu Asp Glu Ile Val Asn Val Arg Lys
 85 90 95
 Ala Leu Lys Arg Pro Asp Asp Ala Asn Asp Gln Ser Arg His Glu Asn
 100 105 110
 Gln Arg Ser Pro Lys Asp Ala Asp Gly Gly Ser Lys Asn Glu Ala Ser
 115 120 125
 Ser Asn Pro Gln Glu Ser Ala Ser Asn Ser Ser Glu Leu Ser Ala Ala
 130 135 140
 Glu Lys Gln Asp Leu Gln Asn Lys Leu Thr Lys Leu Leu Ser Met Leu
 145 150 155 160
 Asp Glu Val Asp Lys Arg Tyr Lys Gln Tyr Tyr His Gln Met Gln Ile
 165 170 175
 Val

<210> 777

<211> 59

<212> PRT

<213> Eucalyptus grandis

<400> 777

Gly Asn Glu Val Ser Ser Asp Tyr Gly Trp Lys Phe Leu Phe Ala Gly
 1 5 10 15
 Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
 20 25 30
 Arg Pro Asp Ile Lys Arg Gly Asn Ile Ser Pro Asp Glu Glu Leu
 35 40 45
 Ile Ile Arg Leu His Lys Leu Leu Gly Asn Arg
 50 55

<210> 778

<211> 175

<212> PRT

<213> Eucalyptus grandis

<400> 778

Met His His Pro Pro Asn Pro Asp Ser Leu Ser Leu Leu Gln Ser Ala
 1 5 10 15
 Arg Thr Pro Asn Ala Pro Pro Glu His Pro Val Pro Ser Thr Ser Arg
 20 25 30
 Arg Asp Glu Val Ala Val Leu Lys Ser Gln Lys Ala Gly Arg Glu Lys
 35 40 45
 Leu Arg Arg Asp Arg Leu Asn Glu His Phe Ile Glu Leu Gly Asn Thr
 50 55 60
 Leu Asp Pro Asp Arg Pro Lys Asn Asp Lys Ala Thr Ile Leu Ser Asp
 65 70 75 80
 Thr Val Gln Leu Leu Lys Asp Leu Thr Ala Gln Val Asn Gln Leu Lys
 85 90 95
 Ala Glu Tyr Ser Thr Phe Cys Glu Glu Ser Arg Glu Leu Thr Gln Glu
 100 105 110
 Lys Asn Asp Leu Lys Glu Glu Lys Ala Ser Leu Lys Ser Asp Ile Glu
 115 120 125
 Ser Leu Asn Ala Gln Tyr Gln Gln Arg Ala Arg Ala Met Phe Pro Trp

130						135									140
Pro	Ile	Met	Asp	His	Ser	Val	Val	Met	Ala	Pro	Pro	Ser	Tyr	Pro	Tyr
145						150				155					160
Pro	Val	Pro	Val	Ala	Val	Pro	Ser	Gly	Pro	Ile	Pro	Val	His	Pro	
						165				170				175	

<210> 779
 <211> 162
 <212> PRT
 <213> Eucalyptus grandis

<400> 779

Met	Asn	Val	Glu	Lys	Leu	Met	Lys	Met	Ala	Gly	Ser	Val	Arg	Thr	Gly
1				5					10					15	
Gly	Lys	Gly	Thr	Met	Arg	Arg	Lys	Lys	Ala	Val	His	Lys	Thr	Thr	
			20				25					30			
Thr	Thr	Asp	Asp	Lys	Arg	Leu	Gln	Ser	Thr	Leu	Lys	Arg	Ile	Gly	Val
		35				40					45				
Asn	Ala	Ile	Pro	Ala	Ile	Glu	Glu	Val	Asn	Ile	Phe	Lys	Asp	Asp	Val
	50					55					60				
Val	Ile	Gln	Phe	Val	Asn	Pro	Lys	Val	Gln	Ala	Ser	Ile	Ala	Ala	Asn
	65				70				75					80	
Thr	Trp	Val	Val	Ser	Gly	Ala	Pro	Gln	Thr	Lys	Lys	Leu	Gln	Asp	Ile
				85					90					95	
Leu	Pro	Gly	Ile	Ile	Asn	Gln	Leu	Gly	Pro	Asp	Asn	Leu	Asp	Asn	Leu
			100					105					110		
Arg	Lys	Leu	Ala	Glu	Gln	Phe	Gln	Lys	Gln	Ser	Pro	Gly	Ala	Ala	Ala
		115					120						125		
Thr	Ala	Gly	Ala	Thr	Ala	Met	Gln	Glu	Asp	Asp	Asp	Asp	Glu	Val	Pro
	130					135					140				
Glu	Leu	Val	Pro	Gly	Glu	Thr	Phe	Glu	Ala	Ala	Ala	Glu	Glu	Gly	His
	145				150					155					160

Lys Ser

<210> 780
 <211> 151
 <212> PRT
 <213> Eucalyptus grandis

<400> 780

Met	Gly	Glu	Pro	Ile	Phe	Leu	Pro	Gly	Arg	Thr	Ser	Leu	Val	Gly	Ser
1				5					10					15	
Ile	Ser	Val	Asn	Val	Val	Gly	Ile	Gln	His	Asn	Ala	Gly	Thr	Phe	Arg
			20					25					30		
Ala	Gly	Glu	Thr	Val	Ala	Leu	Val	Arg	Glu	Pro	Ser	Asn	Thr	Asp	Asp
		35				40						45			
Glu	Met	Ala	Ile	Gln	Val	Leu	Asn	Thr	Arg	Gly	Met	Val	Val	Gly	Tyr
	50					55					60				
Ile	Lys	Arg	Glu	Ala	Ala	Lys	Val	Leu	Ala	Pro	Leu	Ile	Asp	Ser	Gln
	65				70				75					80	
Leu	Ile	Ser	Val	Tyr	Ala	Ile	Val	Pro	Lys	Val	Pro	Arg	Val	Glu	Lys
				85					90					95	
Leu	Phe	Phe	Ile	Asn	Cys	Gln	Val	Arg	Val	Leu	Ala	Arg	Asp	Asp	Asp
			100					105					110		
Phe	Glu	His	Val	Lys	Ser	Thr	Ile	Leu	Glu	Gly	Lys	Leu	Met	Leu	Thr
		115					120					125			
Pro	Pro	Val	Gly	Lys	Glu	Val	Arg	Gly	Val	Asn	Glu	Ser	Phe	Thr	Leu
	130					135					140				
Val	Gly	Gln	Gly	Val	Glu	Lys									
	145				150										

<210> 781
 <211> 611
 <212> PRT
 <213> Eucalyptus grandis

<400> 781
 Met Met Met Phe Glu Asp Met Gly Ile Cys Gly Asp Leu Asp Phe Phe
 1 5 10 15
 Ser Ala Pro Leu Gly Glu Gly His Gly Val Ala Pro Gln Thr Glu Pro
 20 25 30
 Glu Ala Thr Val Glu Asp Asp Tyr Ser Asp Glu Glu Ile Asp Val Asp
 35 40 45
 Glu Leu Glu Arg Arg Met Trp Arg Asp Lys Met Arg Leu Lys Arg Leu
 50 55 60
 Lys Glu Gln Asn Lys Gly Lys Glu Gly Val Asp Ile Ala Lys Gln Arg
 65 70 75 80
 Gln Ser Gln Glu Gln Ala Arg Arg Lys Lys Met Ser Arg Ala Gln Asp
 85 90 95
 Gly Ile Leu Lys Tyr Met Leu Lys Met Met Glu Val Cys Lys Ala Gln
 100 105 110
 Gly Phe Val Tyr Gly Ile Ile Pro Glu Lys Gly Lys Pro Val Thr Gly
 115 120 125
 Ala Ser Asp Asn Leu Arg Glu Trp Trp Lys Asp Lys Val Arg Phe Asp
 130 135 140
 Arg Asn Gly Pro Ala Ala Ile Ala Lys Tyr Gln Ala Asp His Ser Val
 145 150 155 160
 Pro Gly Lys Asn Asp Gly Cys Asn Pro Ile Gly Pro Thr Pro His Thr
 165 170 175
 Leu Gln Glu Leu Gln Asp Thr Thr Leu Gly Ser Leu Leu Ser Ala Leu
 180 185 190
 Met Gln His Cys Asp Pro Pro Gln Arg Arg Phe Pro Leu Glu Lys Gly
 195 200 205
 Val Pro Pro Pro Trp Trp Pro Thr Gly Asn Glu Asp Trp Trp Pro Gln
 210 215 220
 Leu Gly Leu Pro Lys Asp Gln Gly Ala Pro Pro Tyr Lys Lys Pro His
 225 230 235 240
 Asp Leu Lys Lys Ala Trp Lys Val Gly Val Leu Thr Ala Val Ile Lys
 245 250 255
 His Met Ser Pro Asp Ile Ala Lys Ile Arg Lys Leu Val Arg Gln Ser
 260 265 270
 Lys Cys Leu Gln Asp Lys Met Thr Ala Lys Glu Ser Ala Thr Trp Leu
 275 280 285
 Ala Ile Ile Asn Gln Glu Glu Ser Leu Ala Arg Glu Leu Tyr Pro Asp
 290 295 300
 Ser Cys Leu Pro Leu Ser Ser Ser Gly Gly Ser Gly Ser Leu Val Ile
 305 310 315 320
 Asn Asp Cys Ser Glu Tyr Asp Val Glu Gly Met Glu Asp Glu Pro Asn
 325 330 335
 Tyr Asp Val Gln Glu Arg Lys Pro Glu Asn Leu Asn Pro Pro Ser His
 340 345 350
 Leu Gly Leu Glu Arg Met Arg Gly Pro Phe Val Gln Gln Ser Pro Phe
 355 360 365
 Gln Met Lys Gly Glu Val Val Ser Asn Leu Asp Met Ala Arg Lys Arg
 370 375 380
 Lys Pro Cys Asn Asp Leu Asn Met Val Met Asp His Lys Ile Phe Thr
 385 390 395 400
 Cys Glu Phe Leu Gln Cys Pro Tyr Ser Glu Leu Arg Leu Gly Phe Arg
 405 410 415
 Asp Arg Thr Ser Arg Asp Asn His Gln Leu Ser Cys Pro Tyr Arg Ser
 420 425 430

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Asn Ser Ser Glu Phe Gly Gly Ser Asn Phe His Val Asn Glu Val Lys
435 440 445
Pro Val Ile Phe Pro Gln Gly Phe Val Gln Ser Lys Pro Met Thr Ser
450 455 460
Thr Val Asn Ser Ala Ser Thr Pro Phe Asp Leu Ser Gly Leu Gly Val
465 470 475 480
Pro Glu Asp Gly Gln Lys Val Ile Ser Asp Leu Met Ser Ile Tyr Asp
485 490 495
Thr Ser Ile Gln Gly Asn Lys Asn Met Asn Pro Ala Asn Asp Ala Ile
500 505 510
Ile Glu Asp Gln Ser Arg Pro Gln Pro Lys Leu Gln Gln Asn Glu
515 520 525
Phe Val Gly Ser Phe Phe Gln Gln Pro Asn Ala Ser Ala Asn His His
530 535 540
Met Phe Ser Arg Glu Asp Ile Gln Phe Asp Arg Phe Lys Thr Met Asn
545 550 555 560
Ser Ser Phe Glu Ala Asn Asn His Asn His Asp Asn Leu Gln Leu Met
565 570 575
Phe Gly Ser Pro Phe Asp Leu Ser Ser Phe Asp Phe Lys Glu Glu Leu
580 585 590
Pro Gly Gly Val Met Asp Pro Leu Pro Lys Gln Asp Val Thr Ile Trp
595 600 605
Phe Gln Gln
610

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<210> 782
<211> 133
<212> PRT
<213> Eucalyptus grandis

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<400> 782
Met Val Lys Arg Asp Arg Glu Asp Thr Glu Val Glu Ala Leu Ala Leu
1 5 10 15
Ala Asn Cys Leu Met Leu Leu Ser Arg Val Gly Lys Ser Thr Asp Ser
20 25 30
Pro Trp Leu Asn His Lys Ser Arg Pro Thr Glu Arg Met Phe Ala Cys
35 40 45
Lys Thr Cys Asn Arg Glu Phe Ser Ser Phe Gln Ala Leu Gly Gly His
50 55 60
Arg Ala Ser His Lys Lys Pro Lys Leu Ser Gly Asp Leu Phe His Leu
65 70 75 80
Gly Arg Ser Ala Asp Ser Ser Pro Ala Lys Pro Lys Thr His Glu Cys
85 90 95
Ala Ile Cys Gly Leu Glu Phe Pro Leu Gly Gln Ala Leu Gly Gly His
100 105 110
Met Arg Arg His Arg Ala Ala Met Ala Glu Ser Leu Ala Thr Ala Glu
115 120 125
Lys Pro Val Pro Val
130

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<210> 783
<211> 145
<212> PRT
<213> Eucalyptus grandis

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<400> 783
Met Val Met Asp Ile Ser Asn Asp Asp Arg Tyr Leu Asn Glu Glu Ile
1 5 10 15
Gly Gly Pro Lys Asp Ala Leu Asp Asp Gly Thr Gln Pro Asn Asn Lys
20 25 30
Arg Lys Arg Gly Arg Ala Pro Lys Arg Ala Met Lys Ala Glu Arg Glu

```

```

      35              40              45
Lys Leu Lys Arg Asp His Leu Asn Glu Leu Phe Asp Lys Leu Gly Ser
50              55              60
Leu Leu Glu Leu Ser Glu Pro Asn Asn Gly Lys Ala Ser Ile Ile Asn
65              70              75              80
Glu Thr Ile Arg Leu Leu Lys Asp Met Ile Ser Gln Ile Gln Ser Leu
      85              90              95
Arg Lys Glu Asn Thr Thr Leu Leu Ser Glu Ser His Tyr Val Ala Ala
100              105              110
Glu Thr Asn Glu Leu Lys Asp Glu Asn Phe Ala Leu Glu Ala Gln Ile
115              120              125
Lys Asn Val Gln Arg Glu Leu Glu Asp Lys Leu Gly His Ser Lys Pro
130              135              140
Asp
145

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<210> 784

<211> 322

<212> PRT

<213> *Eucalyptus grandis*

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      <400> 784
Glu Cys Leu Pro Leu Leu Asp Met Thr Gln Gln Pro Pro Trp Gln Glu
1              5              10              15
Leu Val Ala Thr Asp Leu His Gly Asn Glu Trp His Phe Arg His Ile
20              25              30
Phe Arg Gly Gln Pro Arg Arg His Leu Leu Thr Thr Gly Trp Ser Val
35              40              45
Phe Val Ser Ser Lys Lys Leu Ile Ala Gly Asp Ala Phe Ile Phe Leu
50              55              60
Arg Gly Glu Asp Gly Glu Leu Arg Val Gly Val Arg Arg Leu Met Arg
65              70              75              80
Gln Gln Ser Asn Met Pro Ser Ser Val Ile Ser Ser His Ser Met His
      85              90              95
Leu Gly Val Leu Ala Thr Ala Ser His Ala Ile Ala Thr Gly Thr Leu
100              105              110
Phe Ser Val Phe Tyr Lys Pro Arg Thr Ser Arg Ser Glu Phe Ile Val
115              120              125
Ser Leu Asn Lys Tyr Leu Glu Ala Arg Ala His Lys Leu Ser Ile Gly
130              135              140
Met Arg Phe Lys Met Lys Phe Glu Gly Glu Glu Val Ser Glu Arg Arg
145              150              155              160
Phe Ser Gly Thr Ile Ile Gly Val Gly Asp Ser Met Ser Ser Gly Trp
      165              170              175
Thr Asn Ser Glu Trp Arg Ser Leu Lys Val Gln Trp Asp Glu Pro Ser
180              185              190
Ser Ile Met Arg Pro Asp Arg Val Ser Ser Trp Glu Leu Glu Pro Leu
195              200              205
Val Val Thr Ala Pro Ser Asn Ser Gln Gln Val Gln Arg Lys Arg Ala
210              215              220
Arg Pro Thr Val Leu Pro Ser Ser Ser Val Gln Glu Leu Ser Ala Phe
225              230              235              240
Gly Gly Pro Lys Ala Pro Glu Tyr Ser Ser Asp Phe Leu His Gly Asp
      245              250              255
Ser Gln Arg Gly Arg Asp Val Tyr Leu Ser Pro Lys Phe Ser Pro Ser
260              265              270
Ala Arg Ser Lys Ser Leu Asn Tyr Asn Gly Asn Gly Ser Pro Ala Ala
275              280              285
Leu Ser Gly Tyr Thr Val Asn Trp Pro Ser His Met Glu Thr Ile Thr
290              295              300
Asp Pro Cys Thr Pro Val Asn Gly Lys Glu Ser Ser Glu Lys Arg Glu

```

305 310 315 320
Ser Gly

<210> 785
<211> 50
<212> PRT
<213> Eucalyptus grandis

<400> 785
Met Ala Ser Gln Phe Asn Phe Lys Gly Ile Thr Asp Ala Ser Gln Ala
1 5 10 15
Glu Gly Val Ala Gly Lys Ser His Gly Asn His Ser Leu Thr Arg Gln
20 25 30
Pro Ser Ile Tyr Ala Leu Thr Phe Asp Glu Phe Gln Asn Thr Trp Gly
35 40 45
Gly Leu
50

<210> 786
<211> 152
<212> PRT
<213> Eucalyptus grandis

<400> 786
Glu Thr Ser Pro Ser Ser Ser Leu Thr Thr Thr Thr Ala Pro Ala
1 5 10 15
Pro Ala Ala Ala Ala Ala Ala Ala Thr Thr Ser Ser Ser Tyr Ser
20 25 30
Ser Ala Val Ala Val Ala Ala Thr Thr Ala Thr Thr Ser Ser Ser Ser
35 40 45
Thr Ser Ser Thr Gly Ser Asp Pro Ala Leu Glu Pro Ser Lys Arg Ser
50 55 60
Glu Asp Cys Thr Ser Gln Lys Gly Pro Gly Lys Ser Pro Ser Pro Gly
65 70 75 80
Ala His Pro Glu Glu Pro Ala Gly Lys Arg His Lys Ala Gly Gly Ser
85 90 95
Gly Glu His Pro Thr Tyr Arg Gly Val Arg Met Arg Asn Trp Gly Lys
100 105 110
Trp Val Ser Glu Ile Arg Glu Pro Arg Lys Lys Ser Arg Ile Trp Leu
115 120 125
Gly Thr Tyr Pro Thr Ala Glu Met Ala Ala Arg Ala His Asp Val Ala
130 135 140
Ala Leu Ala Ile Lys Gly Ser Phe
145 150

<210> 787
<211> 148
<212> PRT
<213> Eucalyptus grandis

<400> 787
Met Phe Pro Arg Pro Lys Val Asp Pro Ala Ser Ala Gly Thr Val Val
1 5 10 15
Ile Arg Glu Val Trp Ala His Asn Leu Glu Ser Glu Phe Asp Leu Ile
20 25 30
Arg Asp Val Val Asp Thr His Pro Phe Ile Ser Met Asp Thr Glu Phe
35 40 45
Pro Gly Val Val Phe Arg Pro Pro Pro Pro Ser Ala Gly Gly His
50 55 60
Tyr Arg Arg Leu Arg Pro Ser Asp His Tyr Arg Leu Leu Lys Ser Asn

```

65              70              75              80
Val Asp Ala Leu Ser Leu Ile Gln Val Gly Leu Thr Phe Ser Asp Pro
      85
Asp Gly Asn Leu Pro Asp Leu Gly Cys Pro Gly Gly Pro Arg Tyr Ile
      100
Trp Glu Phe Asn Phe Arg Asp Phe Asp Val Ala Arg Asp Ala His Ala
      115
Pro Asp Ser Ile Glu Leu Leu Arg Arg Gln Gly Ile Asp Phe Glu Arg
      130
Asn Arg Ala Glu
      145

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<210> 788

<211> 248

<212> PRT

<213> Eucalyptus grandis

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<400> 788
Lys Pro Ser Glu Arg Arg Gly Gly Pro Arg Gly Pro Phe Arg Gly Ser
1              5              10              15
Gly Gly Arg Arg Gly Gly Phe Asn Asn Gly Glu Ala Gly Glu Gly Glu
      20
Arg Pro Arg Arg Thr Phe Glu Arg Arg Ser Gly Thr Gly Arg Gly Asn
      35
Glu Phe Lys Arg Asp Gly Ala Gly Arg Gly Asn Trp Gly Thr Pro Thr
      50
Asp Glu Ile Ala Pro Glu Pro Glu Glu Pro Val Val Glu Val Glu Lys
65              70              75              80
Asn Val Gly Ser Glu Lys Gln Leu Val Asp Glu Glu Ala Ala Asp Ala
      85
Ser Lys Glu Asn Pro Leu Asn Glu Pro Glu Glu Lys Glu Pro Glu Asp
      100
Lys Glu Met Thr Leu Glu Glu Tyr Glu Lys Val Arg Gly Glu Lys Arg
      115
Lys Ala Leu Leu Ala Leu Lys Ala Glu Glu Arg Lys Val Glu Val Asp
      130
Lys Glu Leu Lys Ser Met Gln Gln Leu Ser Ser Lys Lys Glu Asn His
145              150              155              160
Asp Ile Phe Ile Lys Leu Gly Ser Glu Lys Asp Lys Arg Lys Glu Ala
      165
Ala Glu Lys Glu Glu Arg Ala Glu Lys Ser Val Ser Ile Asn Glu Phe
      180
Leu Lys Pro Ala Glu Gly Glu Arg Tyr Asn Pro Gly Gly Arg Gly
      195
Arg Gly Arg Gly Arg Gly Ala Arg Gly Gly Tyr Gly Gly Gly Gly
      210
Gly Gly Tyr Gly Arg Asp Ala Ala Pro Ser Ile Lys Asp Pro Gly
225              230              235              240
Gln Phe Pro Ser Leu Gly Gly Lys
      245

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<210> 789

<211> 55

<212> PRT

<213> Eucalyptus grandis

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<400> 789
Met Ser Phe Thr Gly Thr Gln Val Lys Cys Lys Ala Cys Glu Lys Thr
1              5              10              15
Val Tyr Pro Val Glu Gln Leu Ser Ala Asp Gly Val Ala Tyr His Lys
      20              25              30

```

Ser Cys Phe Lys Cys Ser His Cys Lys Gly Thr Leu Lys Val Cys Gln
 35 40 45
 Phe Phe Gln Leu Val Tyr Asn
 50 55

<210> 790
 <211> 148
 <212> PRT
 <213> Eucalyptus grandis

<400> 790
 Met Ile Asp Leu Asn Thr Val Glu Asp Asp Glu Thr Pro Ser Ser Gly
 1 5 10 15
 Ser Ser Pro Ala Ser Ser Leu Ser Ser Ala Ile Ser Ala Ser Asn Ile
 20 25 30
 Asn Ser Asn Pro Ala Tyr Pro Thr Ser Ser Ser Ser Ser Ser
 35 40 45
 Cys Ser Pro Leu Cys Leu Glu Leu Trp His Ala Cys Ala Gly Pro Leu
 50 55 60
 Ile Ser Leu Pro Lys Arg Gly Ser Leu Val Val Tyr Phe Pro Gln Gly
 65 70 75 80
 His Leu Glu His Val Ser Asp Phe Pro Thr Ser Val Phe Asp Leu Pro
 85 90 95
 Ser Gln Ile Phe Cys Arg Val Val Asp Val Lys Leu His Ala Asp Ala
 100 105 110
 Ser Thr Asp Asp Val Tyr Ala Gln Val Ser Leu Val Pro Glu Arg Glu
 115 120 125
 Gln Ile Glu His Lys Leu Arg Glu Gly Asp Asn Glu Ile Asp Leu Asp
 130 135 140
 Glu Asp Glu Ile
 145

<210> 791
 <211> 106
 <212> PRT
 <213> Eucalyptus grandis

<400> 791
 Met Ala Ser His Pro Ser Asn His Ser Cys Gly Arg Pro His Gln Gly
 1 5 10 15
 Ala Phe Ala Asp Ala Leu Tyr Lys Glu Leu Trp His Ala Cys Ala Gly
 20 25 30
 Pro Leu Val Thr Leu Pro Arg Glu Gly Glu Arg Val Tyr Tyr Phe Pro
 35 40 45
 Gln Gly His Met Glu Gln Leu Glu Ala Ser Thr Asn Arg Gly Leu Glu
 50 55 60
 Gln Gln Met Pro Ser Phe Asp Leu Pro Ser Lys Ile Leu Cys Arg Val
 65 70 75 80
 Val Asn Ile Gln Leu Arg Ala Glu Pro Glu Thr Asp Glu Val Tyr Ser
 85 90 95
 Gln Ile Thr Leu Leu Pro Glu Pro Glu Gln
 100 105

<210> 792
 <211> 82
 <212> PRT
 <213> Eucalyptus grandis

<400> 792
 Glu Gln Tyr Leu Asn Leu Ala Tyr Val Gln Gln Leu Glu Asn Ser Arg
 1 5 10 15

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Phe Arg Leu Met Gln Leu Glu Gln Glu Leu Gln Arg Ala Arg Gln Gln
    20      25      30
Gly Ile Phe Val Ser Ser Gly Asn Pro Gly Asp Leu Ser His Asn Met
    35      40      45
Ala Ala Ile Gly Asn Gly Ala Met Ala Phe Asp Thr Asp Tyr Ala Arg
    50      55      60
Trp Leu Asp Glu His Gln Arg Leu Ile Asn Asp Leu Arg Ser Gly Val
    65      70      75      80
Asn Phe

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<210> 793
<211> 247
<212> PRT
<213> Eucalyptus grandis

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<400> 793
Phe Phe Leu Tyr Ile Ile Ser Leu Phe Leu Val Arg Glu Asn Ser Glu
 1      5      10      15
Arg Ser Arg Glu Gly Thr Ser Ser Asn Gly Asp Gly Lys Ser Glu Val
    20      25      30
Gln Gly Lys Val Ala Gly Glu Val Asp Ala Ala Ser Glu Asn Val Ser
    35      40      45
Gly Gly Ala Ile Glu Arg Pro Arg Ala Thr Gly Lys Leu Ala Ala Pro
    50      55      60
Val Asn Ser Pro Ser Met Ser Ser Ser Leu Asp Leu Lys Asn Ser Cys
    65      70      75      80
Met Asp Ala Asn Ala Asn Pro Val Ser Ile Leu Gln Pro Gly Val Val
    85      90      95
Pro Pro Glu Ala Trp Leu Gln Asn Glu Arg Glu Leu Lys Arg Glu Arg
    100      105      110
Arg Lys Gln Ser Asn Arg Glu Ser Ala Arg Arg Ser Arg Leu Arg Lys
    115      120      125
Gln Ala Glu Thr Glu Glu Leu Ala Lys Lys Val Asp Ser Leu Ser Ala
    130      135      140
Glu Asn Arg Ala Leu Lys Ser Glu Ile Ser Gln Leu Thr Glu Asn Ser
    145      150      155      160
Asp Lys Leu Arg Leu Glu Asn Ala Thr Leu Met Glu Arg Leu Glu Asn
    165      170      175
Ala Gln Gly Val Glu Lys Ala Val Glu Ser Leu Gly Lys Phe Asn Asp
    180      185      190
Asn Gly Leu Leu Ser Asp Lys Thr Glu Asn Leu Leu Ser Arg Val Asn
    195      200      205
Asn Ser Gly Ala Val Asp Arg Arg Ser Glu Asp Glu Gly Glu Ile Tyr
    210      215      220
Glu Arg Lys Ser Asn Ser Gly Ala Lys Leu His Gln Leu Leu Asp Ser
    225      230      235      240
Lys Pro Arg Thr Asp Ala Val
    245

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<210> 794
<211> 145
<212> PRT
<213> Eucalyptus grandis

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<400> 794
Phe Ser Leu Ser Pro His His Leu Lys Met Glu Val Ala Pro Gln Ala
 1      5      10      15
Glu His His Gln Asn His His His His His His Gln Tyr His His Gln
    20      25      30
Pro Gln Gln Gly Glu Pro Gly Ser Tyr Phe Leu Ser Ala Pro Pro Pro

```



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      35          40          45
Pro Pro His Tyr Ser Ser Ser Gly Leu Cys Tyr Gly Gly Gly Val Gly
50
Asp Asn Asn Asn Gly Gly Tyr Leu His Ser Pro Leu Ser Val Met Pro
65
Leu Lys Ser Asp Gly Ser Leu Cys Ile Met Glu Ala Leu Thr Arg Ser
85
Arg Pro Gln Gly Leu Gly Gln Gly Ser Thr Pro Lys Leu Glu Asp Phe
100
Leu Gly Gly Ala Ser Ala Thr Val Thr Ala Thr Thr Met Pro Leu Ser
115
Leu Asp Ser Leu Tyr Ser Tyr Gln Gln Ser Ala Asp Pro Glu Lys Gln
130
Ser
145

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<210> 795
<211> 220
<212> PRT
<213> Eucalyptus grandis

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      <400> 795
Glu Thr Gln Arg Glu Lys Val Glu Arg Glu Arg Glu Thr Ser Ile Pro
1      5      10      15
Ser Gln Ser Pro Gln Pro Thr Ile Leu Pro Pro Thr Ala Ser Ser Pro
20
Gly Arg Ser Asp Pro Pro Gly Asp Ala Thr Thr Met Val Lys Pro Ser
35
Gly Gly Gly Gly Asp Arg Ala Pro Pro Leu Ala Pro Phe Leu Ser Lys
50
Cys Tyr Glu Met Val Glu Asp Glu Ala Thr Asp Pro Ile Ile Ala Trp
65
Gly Ser Ala Gly Asp Thr Phe Val Ile Trp Asp Ile Thr Gln Phe Thr
85
Leu Gln Leu Leu Pro His Tyr Phe Lys His Ser Asn Phe Ser Ser Phe
100
Met Arg Gln Leu Asn Ile Tyr Gly Phe Arg Lys Val Asp Ser Asp Arg
115
Trp Glu Phe Ala Asn Asp Gly Phe Ile Arg Gly Gln Lys His Met Leu
130
Lys Asn Ile Arg Arg Arg Lys Asn Val Gln Val Val Asp Gln Lys Lys
145
Ser Leu Gln Lys Gln Asp Asn Ser Val Glu Glu Val Asp Lys Ile Lys
165
Ile Asp Gly Leu Trp Lys Glu Val Glu Asn Leu Lys Ile Asp Lys Thr
180
Val Leu Ser Leu Glu Leu Gly Lys Val Arg Gln Leu Gln Glu Thr Ser
195
Asp Asn Lys Leu Val Leu Leu Arg Asp Arg Val Gln
210      215      220

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<210> 796
<211> 212
<212> PRT
<213> Eucalyptus grandis

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      <400> 796
Met Ile Gly Ala Ala Thr Asn Gln Ile Pro Pro Pro Pro Pro Pro
1      5      10      15
Gln Pro Gln Gln Ala Ala Pro Ala Ala Ala Ile Arg Phe Pro Asp
20      25      30

```

Ser Val Tyr Asn Ala Leu Arg Val Gly Ala Val Phe Gln Arg Leu Ser
 35 40 45
 Lys His Leu Ala Thr Ile Gly Lys Gly Ser Gly Leu Ser Ala Ser Cys
 50 55 60
 Gly Thr Ser Met Glu Phe Leu Asn Ser Cys Leu Cys Leu Ala Arg Gly
 65 70 75 80
 Ile Asp Tyr Ala Val Ala Asn Asn Glu Val Leu Pro Lys Ala His Glu
 85 90 95
 Leu Pro Val Leu Leu Lys Arg Leu Cys Leu Leu Lys Asp Asp Ser Phe
 100 105 110
 Tyr Leu Ser Val Ile Met Val Leu Met Ile Ser Val Lys Asn Ala Cys
 115 120 125
 Lys Tyr Lys Trp Phe Ser Glu Lys Asp Cys Gln Glu Leu Leu Ala Leu
 130 135 140
 Val Asp Glu Ile Gly Lys Asn Phe Gln Ser Pro Arg Asp Ala Ala Val
 145 150 155 160
 Gly Ser Thr Ala Ser Phe Ser Arg Val Ser Ser Ile Phe Ala Arg Phe
 165 170 175
 Tyr Pro Gln Leu Lys Met Gly Tyr Asp Leu Ile Ser Leu Glu Val Glu
 180 185 190
 Pro Gly Tyr Ala Ala Leu Val Asn Asp Phe His Ile Ser Lys Ser Met
 195 200 205
 Val His Ser Pro
 210

<210> 797

<211> 269

<212> PRT

<213> Eucalyptus grandis

<400> 797

Met Asn Ser Thr Thr Thr Gln Phe Val Ser Ser Arg Arg Met Gly Met
 1 5 10 15
 Tyr Asp Pro Ile His Gln Ile Gly Met Trp Asp Glu Asn Phe Lys Gln
 20 25 30
 Asn Gly Asn Pro Asn Ala Pro Pro Ala Leu Ile Ile Pro Met His Ala
 35 40 45
 Asn Leu Asp Asn Gln Ser Glu Asp Thr Ser His Gly Ser Gln Asp Thr
 50 55 60
 Ala Gly Lys Tyr Glu Gln Glu Thr Ser Lys Pro Tyr Asp Lys Val Gln
 65 70 75 80
 Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser Arg Leu Arg
 85 90 95
 Lys Lys Ala Tyr Val Gln Gln Leu Glu Ala Ser Arg Leu Lys Leu Met
 100 105 110
 Gln Leu Glu Gln Glu Val Asp Arg Ala Arg Gln Gln Gly Val Tyr Met
 115 120 125
 Ala Ser Gly Val Asp Ser Ala Tyr Pro Gly Tyr Gly Gly Cys Leu Asn
 130 135 140
 Ser Gly Ile Val Ala Phe Glu Met Glu Tyr Gly His Trp Ile Asp Glu
 145 150 155 160
 Gln Asn Arg Gln Ile Cys Glu Leu Arg Ala Ala Leu Asn Asp His Arg
 165 170 175
 Thr Asp Val Glu Leu Arg Ile Leu Val Glu Ser Gly Met Asn His Tyr
 180 185 190
 Leu Glu Leu Phe Arg Met Lys Ala Val Ala Ser Lys Ala Asp Val Phe
 195 200 205
 Tyr Val Met Ser Gly Met Trp Arg Thr Ser Ser Glu Arg Phe Phe Leu
 210 215 220
 Trp Ile Gly Gly Phe Arg Pro Ser Glu Leu Leu Lys Val Leu Met Pro
 225 230 235 240

Gln Leu Asp Pro Leu Ser Asp Gln Gln Trp Ala Phe Val Ser Asn Leu
 245 250 255
 Arg Gln Ala Cys Gln Gln Ala Glu Asp Ala Leu Lys Gln
 260 265

<210> 798
 <211> 145
 <212> PRT
 <213> Eucalyptus grandis

<400> 798
 Ile Asn Thr Thr Pro Gln Phe Leu Ser Leu Arg Ser His Pro Asn Arg
 1 5 10 15
 His Pro Gln Ser Leu Ser Phe Ser Leu Phe Ser Val Cys Pro Val
 20 25 30
 Cys Asp Lys Gly Phe Pro Ser Tyr Gln Ala Leu Gly Gly His Lys Ala
 35 40 45
 Ser His Arg Lys His Ala Ser Ser Ala Ala Ala Gly Gly Asp
 50 55 60
 Asp Gln Pro Thr Thr Ser Thr Ser Ala Ala Thr Thr Ser Ser Gly
 65 70 75 80
 Val Ser Gly Lys Val His Glu Cys Ser Ile Cys His Lys Ser Phe Pro
 85 90 95
 Thr Gly Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Glu Ala Pro
 100 105 110
 Ala Pro Ile Pro Ala Ser Phe Ser Ala Pro Ser Ala Ala Ala Pro
 115 120 125
 Ala Ala Ser Gly Val Ser Val Ser Glu Gly Val Gly Ser Thr His Thr
 130 135 140
 Gln
 145

<210> 799
 <211> 121
 <212> PRT
 <213> Eucalyptus grandis

<400> 799
 Arg His His Lys Ile Gln Gln Leu Gln Arg Ala Arg Ser Glu Leu Ala
 1 5 10 15
 Arg Met Phe Ser Leu Glu Gly Gln Leu Glu Asp Pro Val Arg Ser Gly
 20 25 30
 Trp Gln Leu Val Phe Val Asp Arg Glu Asn Asp Ser Leu Leu Gly
 35 40 45
 Asp Gly Pro Trp Pro Glu Phe Val Asn Ser Val Trp Cys Ile Lys Ile
 50 55 60
 Leu Ser Pro Gln Glu Val Gln Gln Met Gly Lys Gln Asp Leu Glu Leu
 65 70 75 80
 Leu Asn Ser Ile Pro Val Gln Arg His Ser Asn Gly Gly Cys Asp Glu
 85 90 95
 Phe Thr Asn Arg Gln Asp Ser Arg Thr Ile Asn Ser Gly Ile Pro Ser
 100 105 110
 Val Gly Ser Leu Asp Tyr Gly Thr Leu
 115 120

<210> 800
 <211> 182
 <212> PRT
 <213> Eucalyptus grandis

<400> 800

Thr Asp Asp Thr Gly Asp Lys Asn His Arg Phe Glu Gly Gly Gln Leu
 1 5 10 15
 Gly Val Ala Ala Ala Ser Asp Ser Ser Asp Arg Ser Lys Glu Lys Ala
 20 25 30
 Thr Asp Gln Lys Thr Leu Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala
 35 40 45
 Arg Lys Ser Arg Leu Arg Lys Lys Ala Tyr Val Gln Gln Leu Glu Ser
 50 55 60
 Ser Arg Leu Lys Leu Thr Gln Leu Glu Gln Glu Arg Ala Arg
 65 70 75 80
 Gln Gln Gly Ile Phe Ile Ser Gly Ser Gly Glu Gln Ser His Ser Met
 85 90 95
 Ser Gly Asn Gly Ala Leu Ala Phe Asp Val Glu Tyr Ala Arg Trp Leu
 100 105 110
 Glu Glu His Asn Lys Val Val Asn Glu Leu Arg Asn Ala Val Asn Ala
 115 120 125
 His Ala Gly Asp Thr Glu Leu Arg Thr Ile Val Asp Asn Val Ala Ala
 130 135 140
 His Phe Asp Glu Ile Phe Lys Leu Lys Gly Thr Ala Ala Lys Ala Asp
 145 150 155 160
 Val Phe His Ile Leu Ser Gly Met Trp Lys Thr Pro Ala Glu Arg Cys
 165 170 175
 Phe Met Trp Ile Gly Gly
 180

<210> 801
 <211> 74
 <212> PRT
 <213> Eucalyptus grandis

<400> 801
 Met Ser Phe Thr Gly Thr Gln Val Lys Cys Lys Ala Cys Glu Lys Thr
 1 5 10 15
 Val Tyr Pro Val Glu Gln Leu Ser Ala Asp Gly Val Ala Tyr His Lys
 20 25 30
 Ser Cys Phe Lys Cys Ser His Cys Lys Gly Thr Leu Lys Leu Ser Ser
 35 40 45
 Tyr Ser Ser Met Glu Gly Val Leu Tyr Cys Lys Pro His Phe Glu Gln
 50 55 60
 Leu Phe Lys Glu Thr Gly Asn Phe Asn Lys
 65 70

<210> 802
 <211> 194
 <212> PRT
 <213> Eucalyptus grandis

<400> 802
 Lys Ser Val Phe His Val Phe Tyr Ser Pro Arg Ala Ser His Ala Glu
 1 5 10 15
 Phe Val Val Pro Tyr Gln Lys Tyr Leu Lys Ser Ile Asn Asn Val Ile
 20 25 30
 Cys Ile Gly Thr Arg Phe Lys Met Arg Val Asp Val Asp Asp Ala Pro
 35 40 45
 Glu Lys Arg Cys Thr Gly Val Val Thr Arg Ile Gly Asp Leu Asp Pro
 50 55 60
 Tyr Arg Trp Pro Asn Ser Lys Trp Arg Cys Leu Met Val Gln Trp Asp
 65 70 75 80
 Asp Asp Ile Thr Asn Gly His Gln Asp Arg Val Ser Pro Trp Glu Ile
 85 90 95
 Asp Pro Ser Val Ser His Ser Pro Leu Ser Ile Gln Ser Ser Pro Arg

100 105 110
 Leu Lys Arg Pro Arg Thr Ser Leu Pro Thr Met Pro Pro Val Pro Gly
 115 120 125
 Gly Gly Val Arg Leu Leu Asp Phe Glu Glu Ser Leu Arg Ser Ser Lys
 130 135 140
 Val Leu Gln Gly Gln Glu Lys Leu His Leu Val Ser Pro Val Tyr Gly
 145 150 155 160
 Arg Asp Thr Leu Asn Cys Gln Val Asp Phe Glu Gln Ser Pro Ala His
 165 170 175
 Gln Gly Leu Ala Ser Val Val Ser Lys Lys Arg Pro Thr Ile Ser Met
 180 185 190
 Ser Thr

<210> 803

<211> 282

<212> PRT

<213> Eucalyptus grandis

<400> 803
 Arg Arg Ala Asn Arg Pro Gln Thr Val Met Pro Ser Ser Val Leu Ser
 1 5 10 15
 Ser Asp Ser Met His Ile Gly Leu Leu Ala Ala Ala His Ala Ala
 20 25 30
 Ala Thr Asn Ser Arg Phe Thr Ile Phe Tyr Asn Pro Arg Ala Ser Pro
 35 40 45
 Ser Glu Phe Val Ile Pro Leu Ala Lys Tyr Val Lys Ala Val Tyr His
 50 55 60
 Thr Arg Val Ser Val Gly Met Arg Phe Arg Met Leu Phe Glu Thr Glu
 65 70 75 80
 Glu Ser Ser Val Arg Arg Tyr Met Gly Thr Ile Thr Gly Ile Ser Asp
 85 90 95
 Leu Asp Pro Val Arg Trp Gln Asn Ser His Trp Arg Ser Val Lys Val
 100 105 110
 Gly Trp Asp Glu Ser Thr Ala Gly Glu Arg Gln Pro Arg Val Ser Leu
 115 120 125
 Trp Glu Ile Glu Pro Leu Thr Thr Phe Pro Met Tyr Pro Ser Pro Phe
 130 135 140
 Pro Leu Arg Leu Lys Arg Pro Trp Pro Ser Gly Leu Pro Ser Phe His
 145 150 155 160
 Ala Leu Arg Asp Gly Asp Met Ser Ile Ser Ser Ser Leu Met Trp Leu
 165 170 175
 Gln Gly Val Gly Asp Gln Gly Val Gln Ser Leu Asn Phe Gln Gly Phe
 180 185 190
 Gly Met Thr Pro Trp Leu Gln Pro Arg Tyr Asp Thr Ser Met Ala Ala
 195 200 205
 Leu Gln Thr Asp Val Tyr Gln Ala Met Ala Ser Ala Ala Leu Gln Asp
 210 215 220
 Met Arg Ala Val Asp Pro Ser Lys Cys Ala Ser Gln Ser Leu Leu Pro
 225 230 235 240
 Leu Gln Gln Ser Gln Asn Val Pro Met Gly Gln Ala Ser Ile Ile Gln
 245 250 255
 Arg Gln Met Leu Gln Gln Ser Gln Ser Gln Asn Ser Leu Leu Gln Gly
 260 265 270
 Phe Gln Glu Asn Gln Ala Lys Pro Lys Gly
 275 280

<210> 804

<211> 177

<212> PRT

<213> Eucalyptus grandis

<400> 804

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Asp Lys Leu Arg Glu Ile Glu Asn Ser Leu Phe Gly Pro Glu Ser Asp
 1          5          10          15
Ile Ser Asp Ser Cys Asn Cys Cys Leu Asn Ser Gly Ser His Gln Phe
 20          25          30
Pro Ser Thr Gly Gln Trp Asn Val Asn Gln Met Ile Glu Met Ile Pro
 35          40          45
Lys Leu Asp Leu Lys Asp Met Leu Ile Val Cys Ala Gln Ala Val Ala
 50          55          60
Glu Ala Asp Met Pro Arg Thr Ala Ala Leu Met Glu Val Leu Glu Arg
 65          70          75          80
Met Val Ser Val Ser Gly Asp Pro Ile Gln Arg Leu Gly Ala Tyr Leu
 85          90          95
Leu Glu Gly Leu Arg Ala Arg Leu Glu Ser Ser Gly Ser Ile Ile Tyr
100          105          110
Arg Lys Leu Lys Cys Lys Glu Pro Thr Gly Ser Glu Leu Met Ser Tyr
115          120          125
Met Ser Ile Leu Tyr Gln Ile Cys Pro Tyr Trp Lys Phe Ala Tyr Glu
130          135          140
Ser Ala Asn Val Val Ile Gly Glu Ala Ile Lys Tyr Glu Ser Arg Ile
145          150          155          160
His Ile Ile Asp Phe Gln Ile Ala Gln Gly Ser Gln Trp Ile Pro Ile
165          170          175
Ile

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<210> 805

<211> 86

<212> PRT

<213> Eucalyptus grandis

<400> 805

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Met Gly Arg Ser Pro Arg Cys Asp Lys Asp Gly Leu Asn Lys Gly Ala
 1          5          10          15
Trp Thr Ala Ala Glu Asp Gln Ile Leu Met Asp Tyr Val Lys Leu His
 20          25          30
Gly Glu Gly Lys Trp Ser Arg Leu Ser Arg Glu Thr Gly Leu Arg Arg
 35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Asp
 50          55          60
Ile Lys Arg Gly Asn Ile Ser Pro Asp Glu Glu Glu Leu Ile Ile Arg
 65          70          75          80
Leu His Lys Leu Leu Gly
 85

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<210> 806

<211> 133

<212> PRT

<213> Eucalyptus grandis

<400> 806

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Met Arg Leu Ser Ser Ser Gly Phe Asn His Gln Ser Pro Glu Ala Ser
 1          5          10          15
Asn Ala Gly Glu Lys Lys Cys Leu Asn Ser Glu Leu Trp His Ala Cys
 20          25          30
Ala Gly Pro Leu Val Ser Leu Pro Pro Val Gly Ser Arg Val Val Tyr
 35          40          45
Phe Pro Gln Gly His Ser Glu Gln Val Ala Ala Ser Thr Asn Lys Glu
 50          55          60
Val Asp Ala His Ile Pro Asn Tyr Pro Asn Leu Ser Pro Gln Leu Ile

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65              70              75              80
Cys Gln Leu His Asn Val Thr Met His Ala Asp Val Glu Thr Asp Glu
      85      90      95
Val Tyr Ala Gln Met Thr Leu Gln Pro Leu Ser Pro Gln Glu Lys
      100      105      110
Asp Leu Tyr Leu Leu Pro Ala Glu Leu Gly Thr Pro Ser Lys Gln Pro
      115      120      125
Thr Asn Tyr Phe Cys
130

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<210> 807
<211> 222
<212> PRT
<213> Eucalyptus grandis

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<400> 807
Ser Pro Phe Leu Ser Leu Thr Thr Ser Ser Ser Ser Pro Pro Arg
1      5      10      15
Arg Lys Ile Arg Thr Leu Gly Arg Ala Asn Arg Arg Asn Pro Ser
      20      25      30
Pro Ala Glu Val Ala Ala Ala Ala Val His Ala Tyr Leu Ser Arg Arg
      35      40      45
Arg Pro Ala Glu Arg Ile Leu Leu Arg Ser Gly Pro Met Ser Pro Ala
      50      55      60
Arg Ser Lys Pro Ile Ala Ile Arg Ala Val Phe Tyr Ala Asn Leu Glu
      65      70      75      80
Ser Glu Phe Ala Leu Ile Arg Ser Val Val Asp Arg Phe Pro Ile Ile
      85      90      95
Ser Met Asp Thr Glu Phe Pro Gly Thr Val Ile Arg Pro Gly Pro Ala
      100      105      110
Gly Gly Gly Gly Gly Arg Ala Leu Pro Pro Pro Glu Ser Asn Tyr Gly
      115      120      125
Leu Leu Lys Ala Asn Val Asp Arg Met His Met Ile Gln Ile Gly Leu
      130      135      140
Thr Leu Ser Asp Gly Glu Gly Asn Leu Pro Asp Phe Gly Thr Lys Cys
      145      150      155      160
Ala Tyr Ile Trp Glu Phe Asn Phe Arg Asp Phe Asp Ala Ala Arg Asp
      165      170      175
Val Gln Asn Pro Asp Ser Val Ala Leu Leu Arg Lys Gln Gly Ile Asp
      180      185      190
Phe Glu Met Asn Arg Gln Lys Gly Ala Asp Ser Ala Arg Phe Gly Glu
      195      200      205
Leu Leu Met Ser Ser Gly Leu Val Cys Asn Asp Glu Val Ser
      210      215      220

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<210> 808
<211> 111
<212> PRT
<213> Eucalyptus grandis

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<400> 808
Arg Gly Gly Phe Asn Met Glu Lys Leu Ala Arg Gly Ser Val Gln Glu
1      5      10      15
Glu His Leu Asn Ala Ala Val Ala Leu Asp Glu Gly Trp Tyr Cys Thr
      20      25      30
Pro Arg Met Leu His Phe Ser Phe Glu Asn Glu Phe Lys Arg Asp Gly
      35      40      45
Ala Gly Arg Gly Asn Trp Gly Thr Pro Thr Asp Glu Ile Ala Pro Glu
      50      55      60
Pro Glu Glu Pro Val Val Glu Val Glu Lys Asn Val Gly Ser Glu Lys
      65      70      75      80

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Gln Leu Val Asp Glu Glu Ala Ala Asp Ala Ser Lys Glu Asn Pro Leu
 85 90 95
 Asn Glu Pro Glu Glu Lys Glu Pro Glu Asp Lys Glu Met Thr Leu
 100 105 110

<210> 809

<211> 159

<212> PRT

<213> Eucalyptus grandis

<400> 809

Gln Ser Gly Leu Pro Leu Asp Asp Arg Pro Glu Gly Ala Arg Ser Pro
 1 5 10 15
 Ser Pro Glu Pro Ile Tyr Asp Asn Met Gly Ile Arg Ile Asn Thr Arg
 20 25 30
 Glu Tyr Arg Ala Arg Glu Arg Leu Asn Lys Glu Arg Gln Asp Ile Ile
 35 40 45
 Thr Gln Ile Ile Lys Arg Asn Pro Ala Phe Lys Pro Pro Ala Asp Tyr
 50 55 60
 Arg Pro Pro Lys Leu Gln Lys Lys Leu Tyr Ile Pro Met Lys Glu Tyr
 65 70 75 80
 Pro Gly Tyr Asn Phe Ile Gly Leu Ile Ile Gly Pro Arg Gly Asn Thr
 85 90 95
 Gln Lys Arg Met Glu Arg Glu Thr Gly Ala Lys Ile Val Ile Arg Gly
 100 105 110
 Lys Gly Ser Val Lys Glu Gly Arg Leu Gln Gln Lys Arg Asp Leu Lys
 115 120
 Pro Asp Pro Ala Glu Asn Glu Asp Leu His Val Leu Val Glu Ala Glu
 130 135 140
 Thr Gln Glu Ala Leu Asp Ala Ala Ala Gly Met Val Glu Lys Leu
 145 150 155

<210> 810

<211> 387

<212> PRT

<213> Eucalyptus grandis

<400> 810

Met Cys Gly Gly Ala Ile Ile Ser Asp Phe Ile Pro Asn Gln Arg Ala
 1 5 10 15
 Arg Arg Leu Thr Ser Asp Phe Leu Trp Pro Asp Leu Lys Arg Ser Ala
 20 25 30
 Gly Lys Gln Ser Arg Arg Pro Ala Arg Ser Glu Val Val Asp Val Val
 35 40 45
 Asp Asp Asp Phe Glu Ala Asp Phe Gln Gly Phe Lys Asp Glu Ser Asp
 50 55 60
 Val Glu Asp Asp Phe Asp Asp Glu Val Glu Val Asp Val Lys Pro Phe
 65 70 75 80
 Ala Phe Ser Ala Ala Glu Pro Arg Tyr Ser Lys Gly Ser Ser Thr Thr
 85 90 95
 Lys Ser Val Glu Tyr Asn Gly Gln Ala Glu Lys Ser Ala Lys Arg Lys
 100 105 110
 Arg Lys Asn Gln Tyr Arg Gly Ile Arg Gln Arg Pro Trp Gly Lys Trp
 115 120 125
 Ala Ala Glu Ile Arg Asp Pro Arg Lys Gly Val Arg Val Trp Leu Gly
 130 135 140
 Thr Phe Asn Thr Ala Glu Glu Ala Ala Arg Ala Tyr Asp Ala Glu Ala
 145 150 155 160
 Arg Arg Ile Arg Gly Lys Lys Ala Lys Val Asn Phe Pro Asp Asp Ser
 165 170 175
 Ser Ser Ala Ser Ser Lys Arg Ser Val Lys Ser Asn Val Gln Lys Leu

180 185 190
 Pro Lys Thr Thr Thr Asn Asn Val Gln Pro Asn Leu Asn Gln Asn Phe
 195 200 205
 Asn Tyr Ala Asn Ser Ser Asp Asp Ile Tyr Ser Ser Met Gly Phe
 210 215 220
 Val Glu Glu Lys Pro Pro Thr Asn Gln Phe Tyr Met Asp Ala Leu Asn
 225 230 235 240
 Ala Gln Gly Val Ser Gly Met Asn Ser Leu Ser Pro Ala Asp Asn Ala
 245 250 255
 Pro Leu Tyr Phe Asn Ser Asp Gln Gly Ser Asn Ser Phe Glu Cys Ser
 260 265 270
 Asp Phe Gly Trp Gly Glu Asn Ala Pro Arg Thr Pro Asp Val Ser Ser
 275 280 285
 Val Leu Ser Ala Thr Leu Glu Val Asp Glu Ser Gln Phe Glu Asp Ala
 290 295 300
 Asn Pro Arg Lys Lys Ile Arg Ser Ala Ser Asp Asp Val Ser Glu Glu
 305 310 315 320
 Glu Asn Thr Ala Ala Lys Thr Phe Ser Glu Glu Leu Ser Ala Phe Glu
 325 330 335
 Ser Asp Met Lys Phe Phe Gln Met Pro Phe Val Asp Gly Gly Trp Asp
 340 345 350
 Pro Ser Val Glu Ala Leu Leu Gly Gly Glu Ala Thr Gln Asp Gly Gly
 355 360 365
 Asn Ala Val Asp Leu Trp Ser Phe Asp Asp Leu Ala Pro Met Met Gly
 370 375 380
 Gly Val Phe
 385

<210> 811

<211> 219

<212> PRT

<213> Eucalyptus grandis

<400> 811

His Gly Gly Ala Ala Gly Phe Leu Gly Pro Arg Ala Val Pro Met Lys
 1 5 10 15
 Gln Ala Gly Leu Ala Gln Lys Pro Thr Lys Leu Tyr Arg Gly Val Arg
 20 25 30
 Gln Arg His Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro Lys Asn
 35 40 45
 Arg Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Glu Ala Ala
 50 55 60
 Leu Ala Tyr Asp Lys Ala Ala Tyr Arg Leu Arg Gly Asp Phe Ala Arg
 65 70 75 80
 Leu Asn Phe Pro His Leu Lys His Lys Gly Ser His Ile Gln Gly Asp
 85 90 95
 Phe Gly Asp Tyr Lys Pro Leu His Ser Ser Val Asp Ala Lys Leu Gln
 100 105 110
 Ala Ile Cys Gln Asp Met Ala Glu Lys Pro Ala Asp Gly Lys Lys Arg
 115 120 125
 Arg Ser Ala Pro Ala Gly Gly Gly Ser Ser Ala Ala Ala Ser Pro
 130 135 140
 Arg Arg Pro Glu Pro Glu Pro Glu Pro Val Lys Thr Glu Val Gly Val
 145 150 155 160
 Ser Ala Ala Thr Ser Ser Ser Pro Glu Ser Asp Asp Ala Ser Val Glu
 165 170 175
 Glu Ser Ser Pro Leu Ser Glu Leu Thr Phe Asn Asp Phe Val Glu Pro
 180 185 190
 Gln Trp Glu Ser Val Gly Val Pro Glu Asn Phe Ser Leu Gln Lys Tyr
 195 200 205
 Pro Ser Glu Ile Asp Trp Ala Ala Ile Tyr Ser

210

215

<210> 812
 <211> 75
 <212> PRT
 <213> Eucalyptus grandis

<400> 812

Met	Lys	Glu	Arg	Gln	Arg	Trp	Arg	Ala	Glu	Glu	Asp	Ala	Leu	Leu	Arg
1				5					10				15		
Ala	Tyr	Val	Lys	Gln	Tyr	Gly	Pro	Arg	Glu	Trp	His	Leu	Val	Ser	Gln
			20				25					30			
Arg	Met	Asn	Thr	Pro	Leu	Asn	Arg	Asp	Ala	Lys	Ser	Cys	Leu	Glu	Arg
		35				40					45				
Trp	Lys	Asn	Tyr	Leu	Lys	Pro	Gly	Ile	Lys	Lys	Gly	Ser	Leu	Ser	Glu
	50				55						60				
Glu	Glu	Gln	Arg	Leu	Val	Phe	His	Leu	Leu	Pro					
65				70					75						

<210> 813
 <211> 235
 <212> PRT
 <213> Eucalyptus grandis

<400> 813

Val	Val	Leu	Pro	Ser	Ser	Gly	Met	Val	Lys	Ser	Ser	Gly	Gly	Ala	Gly
1				5					10				15		
Asp	Ser	Asp	His	Ser	Asp	Leu	Glu	Ala	Ser	Val	Val	Lys	Glu	Ala	Asp
			20					25				30			
Ser	Ser	Arg	Val	Val	Glu	Pro	Glu	Lys	Arg	Pro	Arg	Lys	Arg	Gly	Arg
		35				40					45				
Lys	Pro	Ala	Asn	Gly	Arg	Glu	Glu	Pro	Leu	Asn	His	Val	Glu	Ala	Glu
	50				55					60					
Arg	Gln	Arg	Arg	Glu	Lys	Leu	Asn	Gln	Arg	Phe	Tyr	Ala	Leu	Arg	Ala
65				70				75				80			
Val	Val	Pro	Asn	Val	Ser	Lys	Met	Asp	Lys	Ala	Ser	Leu	Leu	Gly	Asp
			85					90				95			
Ala	Ile	Ala	Tyr	Ile	Lys	Glu	Leu	Asn	Ser	Lys	Leu	Gln	Thr	Thr	Glu
	100					105						110			
Ser	Asp	Lys	Glu	Asn	Leu	Gln	Lys	Gln	Met	Glu	Ser	Leu	Lys	Lys	Glu
	115					120					125				
Leu	Thr	Asn	Lys	Asp	Ser	Arg	Ser	Ala	Leu	Pro	Gln	Ser	Asp	Lys	Asp
	130				135					140					
Leu	Ser	Ile	Ser	Ser	Asn	His	Gly	Ala	Lys	Leu	Ile	Glu	Leu	Asp	Val
145				150					155			160			
Asp	Val	Lys	Ile	Ile	Gly	Trp	Asp	Val	Met	Ile	Arg	Ile	Gln	Ser	Ser
		165							170				175		
Lys	Lys	Asn	His	Pro	Ala	Ala	Lys	Leu	Met	Gln	Ala	Leu	Met	Glu	Leu
	180					185						190			
Asp	Leu	Asp	Val	His	His	Ala	Ser	Val	Ser	Val	Val	Asn	Asp	Leu	Met
	195					200					205				
Ile	Gln	Gln	Ala	Thr	Val	Lys	Met	Ser	Gly	Arg	Phe	Tyr	Ser	Gln	Glu
	210				215						220				
Gln	Leu	Arg	Leu	Ala	Leu	Ser	Ser	Lys	Ile	Gly					
225				230					235						

<210> 814
 <211> 111
 <212> PRT
 <213> Eucalyptus grandis

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<400> 814
Glu Leu Lys Pro Asp Lys Ile Gly Leu Gln Arg Ser Glu Gln Leu Arg
1 5 10 15
Asp Leu Tyr Glu Ser Leu Leu Gly Gly Thr Asp Ala Gln Asn Lys
20 25 30
Arg Pro Ser Ala Ala Leu Ser Pro Glu Asp Leu Thr Asp Glu Glu Trp
35 40 45
Tyr Tyr Leu Val Cys Met Ser Phe Val Phe Asn Pro Gly Glu Gly Leu
50 55 60
Pro Gly Arg Ala Leu Ala Asp Gly Gln Thr Ile Trp Leu Cys Asn Ala
65 70 75 80
Gln Tyr Ala Asp Ser Lys Val Phe Ser Arg Ser Leu Leu Ala Lys Ser
85 90 95
Ala Ser Ile Gln Thr Val Val Cys Phe Pro Tyr Leu Gly Gly Val
100 105 110

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<210> 815
<211> 107
<212> PRT
<213> Eucalyptus grandis

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<400> 815
Met Glu Ser Glu Arg Tyr Asp Glu Thr Thr Glu Lys Gln Arg Ile Arg
1 5 10 15
Arg Arg Pro His Gln Lys Pro Tyr Arg Gly Ile Arg Met Arg Lys Trp
20 25 30
Gly Lys Trp Val Ala Glu Ile Arg Glu Pro Asn Lys Arg Ser Arg Ile
35 40 45
Trp Leu Gly Ser Tyr Ala Thr Ala Val Ala Ala Arg Ala Tyr Asp
50 55 60
Thr Ala Val Phe Tyr Leu Arg Gly Pro Ser Ala Arg Leu Asn Phe Pro
65 70 75 80
Asp Leu Ile Leu His Glu Gly Gln Asp Ser Leu Gly Glu Val Ser Ala
85 90 95
Ala Ser Ile Arg Arg Arg Ala Ala Glu Val Gly
100 105

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<210> 816
<211> 89
<212> PRT
<213> Eucalyptus grandis

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<400> 816
Met Ala Phe Thr Gly Thr Val Asp Lys Cys Lys Val Cys Asp Lys Thr
1 5 10 15
Val His Val Val Asp Met Met Thr Leu Glu Gly Ile Pro Tyr His Lys
20 25 30
Thr Cys Phe Arg Cys Ser His Cys Asn Gly Thr Leu Val Met Ser Asn
35 40 45
Tyr Ser Ser Met Asp Gly Val Leu Tyr Cys Lys Thr His Phe Glu Gln
50 55 60
Leu Phe Lys Glu Ser Gly Asp Phe Arg Lys Asn Phe His Ser Ala Lys
65 70 75 80
Ser Asp Lys Pro Asn Glu Met Thr Arg
85

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<210> 817
<211> 96
<212> PRT
<213> Eucalyptus grandis

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<400> 817
 Met Glu Ser Glu Arg Tyr Asp Glu Thr Thr Glu Gly Gln Arg Ile Lys
 1 5 10 15
 Arg Arg Pro His Gln Gln Gln Gln Gln Gln Arg Arg Gln Lys
 20 25 30
 Pro Tyr Arg Gly Ile Arg Met Arg Lys Trp Gly Lys Trp Val Ala Glu
 35 40 45
 Ile Arg Glu Pro Asn Lys Arg Ser Arg Ile Trp Leu Gly Ser Tyr Ala
 50 55 60
 Thr Pro Val Ala Ala Ala Arg Ala Tyr Asp Thr Ala Val Phe Tyr Leu
 65 70 75 80
 Arg Gly Pro Ser Ala Arg Leu Asn Phe Pro Asp Leu Ile Trp Arg Glu
 85 90 95

<210> 818
 <211> 159
 <212> PRT
 <213> Eucalyptus grandis

<400> 818
 Met Val Lys Arg Asp Arg Glu Asp Ala Glu Val Glu Ala Leu Ala Val
 1 5 10 15
 Ala Asn Cys Leu Met Leu Leu Pro Arg Val Gly Glu Ser Ala Val Ser
 20 25 30
 Asn Arg Glu Ser Arg Ser Thr Glu Arg Met Phe Ala Cys Lys Thr Cys
 35 40 45
 Asn Arg Glu Phe Ser Ser Phe Gln Ala Leu Gly Gly His Arg Thr Ser
 50 55 60
 His Lys Lys Gln Lys Leu Ile Pro Gly Gly Leu Phe His Leu Gly Cys
 65 70 75 80
 Thr Ala Asp Ser Ser Pro Ala Lys Pro Lys Arg His Glu Cys Ser Ile
 85 90 95
 Cys Gly Leu Glu Phe Pro Met Gly Gln Ala Leu Gly Gly His Met Arg
 100 105 110
 Arg His Arg Ala Ala Met Ala Glu Gly Leu Ala Ala Glu Ala Ala Lys
 115 120 125
 Pro Val Pro Val Leu Lys Arg Ser Asn Ser Lys Arg Val Met Cys Leu
 130 135 140
 Asp Leu Asn Ser Ser Leu Met Glu Asp Asp Leu Thr Leu Arg Leu
 145 150 155

<210> 819
 <211> 241
 <212> PRT
 <213> Eucalyptus grandis

<400> 819
 Glu Asp Ser Leu Asp Lys Glu Pro Pro Pro Pro Pro Pro Arg Phe
 1 5 10 15
 Lys Val His Ser Phe Cys Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr
 20 25 30
 His Gly Gly Phe Ser Val Leu Arg Arg His Ala Asp Glu Cys Leu Pro
 35 40 45
 Gln Leu Asp Met Ser Lys Gln Pro Pro Thr Gln Glu Leu Ala Ala Lys
 50 55 60
 Asp Leu His Gly Asn Glu Trp Arg Phe Arg His Ile Phe Arg Gly Gln
 65 70 75 80
 Pro Arg Arg His Leu Leu Gln Ser Gly Trp Ser Val Phe Val Ser Ser
 85 90 95
 Lys Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn
 100 105 110

Gly Glu Leu Arg Val Gly Val Arg Arg Ala Met Lys Gln Gln Gly Asn
 115 120 125
 Val Ser Pro Ser Val Ile Ser Ser His Ser Met His Leu Gly Val Leu
 130 135 140
 Ala Thr Ala Trp His Ala Ile Ser Thr Gly Thr Met Phe Thr Val Tyr
 145 150 155 160
 Tyr Lys Pro Arg Ile Ser Pro Ala Glu Phe Ile Ile Pro Tyr Asp Gln
 165 170 175
 Tyr Met Glu Ser Leu Lys Lys Asn Tyr Ser Ile Gly Met Arg Phe Lys
 180 185 190
 Met Arg Phe Glu Gly Glu Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr
 195 200 205
 Ile Ile Gly Ile Glu Asp Ala Asp Pro Lys Gly Trp Arg Asp Thr Lys
 210 215 220
 Trp Arg Ser Leu Lys Val Arg Trp Asp Glu Asn Ser Ala Ile Pro Arg
 225 230 235 240
 Pro

<210> 820

<211> 185

<212> PRT

<213> *Eucalyptus grandis*

<400> 820

Phe Arg Gly Val Arg Lys Arg Lys Trp Gly Arg Trp Val Ser Glu Ile
 1 5 10 15
 Arg Leu Pro Asn Ser Arg Glu Arg Ile Trp Leu Gly Ser Tyr Asp Thr
 20 25 30
 Pro Glu Lys Ala Ala Arg Ala Phe Asp Ala Ala Phe Cys Leu Gly
 35 40 45
 Arg Pro Ala Ala Lys Leu Asn Phe Pro Gly Ser Pro Pro Glu Ile Ser
 50 55 60
 Gly Ala Ala Ser Leu Ser Pro Asp Glu Ile Gln Ser Ala Ala Ala Ser
 65 70 75 80
 His Ala Asn Phe Gly Ala Val Ala Val Pro Ala Arg Ala Glu Leu Pro
 85 90 95
 Arg Pro Gly Ser Pro Ala Pro Ser Pro Ser Leu Ser Ala Ser Glu Ala
 100 105 110
 Ser Ser Val Leu Thr Thr Glu Ser Asp Leu Thr Leu Asp Leu Ser Phe
 115 120 125
 Leu Asp Phe Leu Asp Asp Ser Gly Pro Val Ser Gly Glu Pro His Ile
 130 135 140
 Gly Lys Phe Pro Gly Val Glu Glu Ala Pro Asp Val Phe Tyr His Met
 145 150 155 160
 Gln Phe Pro Ser Val Glu Ser Ala Gly Leu Asn Leu Asp Thr Leu Leu
 165 170 175
 Ala Ser Asp Ser Phe Pro Trp Arg Ile
 180 185

<210> 821

<211> 187

<212> PRT

<213> *Eucalyptus grandis*

<400> 821

Glu Ala Asp Phe Leu Ala Lys His Ser Lys Pro Glu Ile Val Asp Met
 1 5 10 15
 Leu Arg Lys His Thr Tyr Arg Asp Glu Leu Glu Gln Ser Lys Arg Ser
 20 25 30
 Tyr Arg Gly Ser Ala Ala Glu Arg Ala Gly Arg Gly Gly Phe Gly Pro

```

      35      40      45
Gly Arg Thr Glu Trp Ser Ala Ala Arg Glu Gln Leu Phe Glu Lys
  50      55      60
Ala Val Thr Pro Ser Asp Val Gly Lys Leu Asn Arg Leu Val Ile Pro
  65      70      75
Lys Gln His Ala Glu Lys His Phe Pro Leu Pro Gly Gly Pro Ala Ala
      85      90      95
Thr Met Lys Gly Val Leu Leu Asn Phe Glu Asp Val Gly Gly Lys Val
      100      105      110
Trp Arg Phe Arg Tyr Ser Tyr Trp Asn Ser Ser Gln Ser Tyr Val Leu
      115      120      125
Thr Lys Gly Trp Ser Arg Phe Val Lys Glu Lys Ser Leu Lys Ala Gly
      130      135      140
Asp Thr Val Cys Phe Gln Arg Ser Thr Gly Pro Asp Lys Gln Leu Tyr
      145      150      155
Ile Asp Phe Lys Pro Arg Gly Gln Pro Pro Ala Gly Pro Ala Ala Pro
      165      170      175
Pro Pro Pro Pro Val Gln Met Val Arg Leu Phe
      180      185

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<210> 822
 <211> 110
 <212> PRT
 <213> *Eucalyptus grandis*

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      <400> 822
Val Asn Pro Pro Thr Arg Thr Phe Val Lys Val His Lys Ser Gly Thr
  1      5      10      15
Phe Gly Arg Ser Leu Asp Ile Ser Lys Phe Ser Ser Tyr Asp Glu Leu
      20      25      30
Arg Ser Glu Leu Ala Arg Met Phe Gly Leu Glu Gly Gln Leu Glu Asp
      35      40      45
Pro Gln Arg Ser Gly Trp Gln Leu Val Phe Val Asp Arg Glu Asn Asp
      50      55      60
Ile Leu Leu Leu Gly Asp Asp Pro Trp Gln Glu Phe Val Asn Asn Val
      65      70      75
Trp Tyr Ile Lys Ile Leu Ser Pro His Glu Val Lys Gln Leu Gly Lys
      85      90      95
Gln Gly Ile Asn Pro Ala Asn Ser Val Pro Arg Gln Ala Leu
      100      105      110

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<210> 823
 <211> 370
 <212> PRT
 <213> *Eucalyptus grandis*

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      <400> 823
Met Thr Arg Arg Cys Ser His Cys Cys Asn Lys Gly His Asn Ser Arg
  1      5      10      15
Thr Cys Pro Val Arg Gly Gly Gly Gly Asp Gly Gly Gly Ala Ala Ala
      20      25      30
Ala Pro Ser Ser Ser Ser Pro Ser Thr Ser Ser Ser Gly Ala Ala Ala
      35      40      45
Ala Ala Ala Ala Ser Ala Ser Gly Gly Val Lys Leu Phe Gly Val
      50      55      60
Arg Leu Thr Asp Gly Ser Ile Met Lys Lys Ser Ala Ser Val Gly Cys
      65      70      75
Leu Ser Ala Ala His Tyr His Ser Ser Ser Ser Ala Ala Ala Ser Pro
      85      90      95
Asn Pro Gly Ser Ser Pro Ile Asp Gly Ser Asp Gly Tyr Leu Ser Asp
      100      105      110

```

Asp Pro Ala Pro Gly Ser Arg Ser Ser Asn Arg Arg Val Glu Arg Lys
 115 120 125
 Lys Gly Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile Gly
 130 135 140
 Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp Phe
 145 150 155 160
 Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr
 165 170 175
 Tyr Ile Arg Gln Ser Asn Ala Gly Arg Arg Lys Arg Arg Ser Ser Leu
 180 185 190
 Phe Asp Met Ala Pro Asp Met Ala Thr Ala Asp Gln Pro Ser His Pro
 195 200 205
 Glu Glu Thr Phe Leu Pro Pro Leu Val Arg Leu Asn Asp Asp Thr Asn
 210 215 220
 Ser Thr Thr Ser Thr Ser Met Gly Leu Asp Leu Glu Arg Thr Pro Met
 225 230 235 240
 Glu Thr Ser His Pro Glu Thr Ser Glu Gly Gly Gly Asp Val Ala Met
 245 250 255
 Glu Ser Ile Asp Gln Val Pro Leu Val Pro Cys Tyr Phe Pro Tyr Tyr
 260 265 270
 Leu Pro Leu Pro Phe Pro Met Trp Pro Pro Asn Met Ala Pro Pro Glu
 275 280 285
 Asp Gly Arg Val Val Glu Thr Ser His His Arg Val Leu Lys Pro Ile
 290 295 300
 Pro Val Ile Pro Lys Glu Pro Leu Asn Ile Asp Gln Ile Val Gly Met
 305 310 315 320
 Ser Gln Leu Ser Leu Ala Glu Asn Glu Pro Ala Pro Leu Ser Leu Lys
 325 330 335
 Phe Leu Gly Glu Thr Ser Arg Gln Ser Ala Phe Ile Lys Ala Pro Ser
 340 345 350
 Ser Val Asn Glu Ser Asp Leu Asp Asn Cys Lys Asp Gly Ala Thr Gln
 355 360 365
 Ala Ala
 370

<210> 824

<211> 160

<212> PRT

<213> Eucalyptus grandis

<400> 824

Glu Leu Trp Leu Ser Phe Gly Thr Gly Glu Lys Lys Ser Ile Asn Ser
 1 5 10 15
 Glu Leu Trp His Ala Cys Ala Gly Pro Leu Val Ser Leu Pro Pro Val
 20 25 30
 Gly Ser Leu Val Val Tyr Phe Pro Gln Gly His Ser Glu Gln Val Ala
 35 40 45
 Ala Ser Met Gln Lys Glu Thr Thr Cys Val Pro Ser Tyr Pro Asn Leu
 50 55 60
 Pro Ala Lys Leu Ile Cys Met Leu His Asn Val Thr Leu His Ala Asp
 65 70 75 80
 Leu Glu Thr Asp Glu Val Tyr Ala Gln Met Thr Leu Gln Pro Val Ser
 85 90 95
 Lys Tyr Asp Gln Glu Ala Leu Leu Ala Ser Asp Met Gly Leu Lys Gln
 100 105 110
 Ser Arg Gln Pro Thr Glu Phe Phe Cys Lys Thr Leu Thr Ala Ser Asp
 115 120 125
 Thr Ser Thr His Gly Gly Phe Ser Val Pro Arg Arg Ala Ala Glu Lys
 130 135 140
 Ile Phe Pro Ser Leu Asp Phe Thr Met Gln Pro Pro Cys Gln Glu Leu
 145 150 155 160

<210> 825
 <211> 129
 <212> PRT
 <213> Eucalyptus grandis

<400> 825
 Met Ala Leu Glu Ala Leu Asn Ser Pro Thr Ala Ala Ala Pro Phe Gly
 1 5 10 15
 His Asp Asp Ala Asp Gly His Pro Trp Ala Lys Arg Lys Arg Ser Lys
 20 25 30
 Arg Pro Arg Ala Asp Pro Gln Asp Gln Pro Ser Glu Glu Glu Tyr Leu
 35 40 45
 Ala Leu Cys Leu Ile Met Leu Ala Arg Arg Arg Arg Arg Pro Gly Ser
 50 55 60
 Ser Gly Arg Leu His Glu Cys Ser Ile Cys His Lys Ala Phe Pro Thr
 65 70 75 80
 Gly Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Asp Gly Gly Ser
 85 90 95
 Ser Ser Ser Ala Ala Arg Ala Ala Ser Ser Ser Glu Ala Gly Gly Pro
 100 105 110
 Ser His Thr Thr Val Ser His Arg Glu Pro Ile Asp Leu Asn Leu Pro
 115 120 125
 Ala

<210> 826
 <211> 115
 <212> PRT
 <213> Eucalyptus grandis

<400> 826
 Arg His Leu Leu Gln Ser Gly Trp Ser Leu Phe Val Ser Ser Lys Lys
 1 5 10 15
 Leu Val Ala Gly Asp Ala Phe Ile Tyr Leu Arg Gly Glu Asn Gly Glu
 20 25 30
 Leu Arg Val Gly Val Arg Arg Ala Met Arg Gln Leu Asn Asn Val Pro
 35 40 45
 Ser Ser Ile Met Pro Ser His Ser Met His Ile Gly Val Leu Ala Thr
 50 55 60
 Ala Trp His Ala Ile Ser Thr Gly Thr Met Phe Thr Val Tyr Tyr Lys
 65 70 75 80
 Pro Arg Thr Ser Pro Ala Glu Phe Ile Ile Pro Phe Asp Lys His Ile
 85 90 95
 Glu Ser Ala Lys Phe Asp Tyr Ser Ile Gly Met Arg Phe Arg Met Thr
 100 105 110
 Phe Glu Trp
 115

<210> 827
 <211> 199
 <212> PRT
 <213> Eucalyptus grandis

<400> 827
 Ser Ser Val His Asp Ile Ser Glu Asn Gly Glu Ala Asp Glu Gln Gln
 1 5 10 15
 Lys His Ser Glu Gln His Glu Ser Ser Pro Ala Thr Gly Val Pro His
 20 25 30
 Pro Gly Val Ser Leu Pro Asn Val Gln Tyr Ala Thr Pro Pro Gln Leu
 35 40 45

Gly Ala Gly His Ala Met Thr Pro Pro Ala Tyr Pro Tyr Pro Asp Pro
 50 55 60
 Tyr Tyr Arg Ser Ile Phe Ala Pro Tyr Asp Ala Gln Ser Tyr Pro Gln
 65 70 75 80
 Gln Pro Tyr Gly Ala Gln Pro Met Val His Leu Gln Leu Met Gly Ile
 85 90 95
 Gln Gln Ala Gly Val Pro Leu Pro Ser Asp Ala Val Glu Glu Pro Val
 100 105 110
 Phe Val Asn Ala Lys Gln Tyr His Gly Ile Leu Arg Arg Gln Ser
 115 120 125
 Arg Ala Lys Ala Glu Leu Glu Asn Lys Ala Leu Lys Ser Arg Lys Pro
 130 135 140
 Tyr Leu His Glu Ser Arg His Leu His Ala Leu Arg Arg Ala Arg Gly
 145 150 155 160
 Cys Gly Gly Arg Phe Leu Asn Ala Lys Lys Asp Glu Asn Gln Gln Ser
 165 170 175
 Glu Val Ser Ser Ala Asp Lys Ser Gln Gly Asn Ile Asn Leu Asn Ser
 180 185 190
 Asp Lys Ser Asp Arg Ser Ser
 195

<210> 828

<211> 98

<212> PRT

<213> Eucalyptus grandis

<400> 828

Val Lys Asp Met Phe Gln Asp Gln Arg Glu Lys Tyr Asp Thr Phe Leu
 1 5 10 15
 Glu Val Met Lys Asp Phe Lys Ala Gln Arg Thr Asp Thr Thr Gly Val
 20 25 30
 Ile Ala Arg Val Lys Glu Leu Phe Lys Gly His Asn Lys Leu Ile Leu
 35 40 45
 Gly Phe Asn Thr Phe Leu Pro Lys Gly Phe Glu Ile Ser Pro Asp Glu
 50 55 60
 Asp Glu Thr Pro Ile Lys Lys Asn Val Glu Phe Glu Glu Ala Ile Ser
 65 70 75 80
 Phe Val Asn Lys Ile Lys Lys Arg Phe Gln Asn Asp Glu His Val Tyr
 85 90 95
 Lys Ser

<210> 829

<211> 136

<212> PRT

<213> Eucalyptus grandis

<400> 829

Met Phe Arg Gln His Asn Leu Leu Leu Asn Phe Asn Pro Thr Asp Asp
 1 5 10 15
 Asp Pro Gln Asp Glu Gly Ser Pro Pro Pro Tyr Val Leu Arg Gly
 20 25 30
 Ala Pro Pro Pro Ala Glu Pro Ser Pro Ala Glu Lys Glu Pro Met Phe
 35 40 45
 Glu Lys Pro Leu Thr Pro Ser Asp Val Gly Lys Leu Asn Arg Leu Val
 50 55 60
 Ile Pro Lys Gln His Ala Glu Lys His Phe Pro Leu Val Gly Glu Ala
 65 70 75 80
 Thr Gln Gln Leu Ser Phe Glu Asp Glu Ser Gly Lys Trp Trp Arg Phe
 85 90 95
 Arg Tyr Ser Tyr Trp Ser Ser Ser Gln Ser Tyr Val Leu Thr Lys Gly

```

                100                105                110
Trp Ser Arg Phe Val Lys Asp Lys Arg Leu Asp Ala Gly Asp Val Val
                115                120                125
Leu Phe Thr Ala Thr Ala Pro Thr
                130                135

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<210> 830
 <211> 96
 <212> PRT
 <213> Eucalyptus grandis

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<400> 830
Met Ala Gln Arg Ser Ala Pro Ala Pro Phe Leu Thr Lys Thr Tyr Gln
 1                5                10                15
Leu Val Asp Asp Pro Ala Thr Asp Asp Val Ile Ser Trp Gly Glu Ser
                20                25                30
Gly Arg Thr Phe Val Val Trp Lys Thr Ala Glu Phe Ala Lys Asp Leu
                35                40                45
Leu Pro Ser Ser Phe Lys His Asn Asn Phe Ser Ser Phe Val Arg Gln
                50                55                60
Leu Asn Thr Tyr Gly Phe Arg Lys Ile Val Pro Asp Lys Trp Glu Phe
                65                70                75                80
Ala Asn Asp Arg Phe Gln Arg Gly Gln Lys Glu Leu Leu Ser Glu Ile
                85                90                95

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<210> 831
 <211> 81
 <212> PRT
 <213> Eucalyptus grandis

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<400> 831
Arg Met Trp Arg Asp Lys Met Arg Leu Lys Arg Leu Lys Glu Gln Asn
 1                5                10                15
Lys Gly Lys Glu Gly Val Asp Ile Ala Lys Gln Arg Gln Ser Gln Glu
                20                25                30
Gln Ala Arg Arg Lys Lys Met Ser Arg Ala Gln Asp Gly Ile Leu Lys
                35                40                45
Tyr Met Leu Lys Met Met Val Ala His Trp Lys Arg Gly Leu Val Ala
                50                55                60
Pro Ala Gly Phe Ala Glu Gly Ser Arg Ser Pro Ala Leu Gln Glu Thr
                65                70                75                80
Ser

```

<210> 832
 <211> 94
 <212> PRT
 <213> Eucalyptus grandis

```

<400> 832
Met Asp Gln Trp Arg Thr Asp Leu Gly Ala Ser Thr Ser Val His Pro
 1                5                10                15
Gln Gln His Gln His Gln His Gln His Pro Ser Ser Arg Leu His
                20                25                30
Ala Ser His Asp Glu Pro Arg Gln Arg Glu Glu Ala Asp Val Arg Asp
                35                40                45
Pro Val Ala Ala Arg Lys Val Gln Lys Ala Asp Arg Glu Lys Leu Arg
                50                55                60
Arg Asp Arg Leu Asn Glu His Phe Leu Glu Leu Gly Ser Thr Leu Asp
                65                70                75                80
Pro Asp Arg Pro Lys Asn Asp Lys Ala Thr Ile Leu Thr Asp

```

85

90

<210> 833
 <211> 245
 <212> PRT
 <213> Eucalyptus grandis

<400> 833
 Lys Lys Thr Ile Ser Ser Glu His Lys Arg Arg Arg Val Val Val Val
 1 5 10 15
 Val Leu Leu Leu Val Pro Ser Thr Ser Phe Phe Pro Pro Pro Ser
 20 25 30
 Ser Ser Leu Pro Pro Ser Leu Ser Leu Asn Leu Pro Asn Pro Ser Arg
 35 40 45
 Arg Arg Arg Arg Glu Arg Glu Arg Glu Arg Glu Asp His
 50 55 60
 Arg Phe Arg Pro Ser Arg Ala Arg Ala Val Met Arg Arg Gly Arg Cys
 65 70 75 80
 Ala Ala Ala Ala Ala Lys Arg Glu Ala Ala Glu Ile Ala Pro Pro Pro
 85 90 95
 Val Pro His Ala Ala Ala Ala Ala Ala Glu Pro Arg Tyr Arg Gly
 100 105 110
 Val Arg Arg Lys Ser Leu Gly Arg Tyr Thr Ala Glu Ile Arg Asp Pro
 115 120 125
 Gly Thr Lys Lys Leu Val Arg Leu Gly Thr Phe Gly Ser Pro Glu Glu
 130 135 140
 Ala Ala Arg Ala Phe Asp Ala Lys Ala Val Ala Phe Arg Gly Val Lys
 145 150 155 160
 Ala Arg Thr Asn Phe Pro Val Ala Pro Ser Ser Phe Pro Pro Ala Ala
 165 170 175
 Ser Arg Asp Leu Arg Ala Pro Leu Ile Glu Ser Arg Lys Phe Gly Arg
 180 185 190
 Arg Gly Ala Arg Asp Leu Arg Gly Asp His His Asp Val Ser Pro Gln
 195 200 205
 Arg Pro Thr Ser Ser Ser Leu Ser Ser Thr Val Val Ser Ser Ser Gly
 210 215 220
 Pro Arg Pro Ser Pro Ser Pro Glu Thr Ala Lys Arg Arg Thr Arg Thr
 225 230 235 240
 Pro Pro Arg His Arg
 245

<210> 834
 <211> 180
 <212> PRT
 <213> Eucalyptus grandis

<400> 834
 Tyr Asn Ser Asn Ser Asp Pro Ile Arg Glu Glu Phe Met Lys Ala Leu
 1 5 10 15
 Glu Pro Phe Met Lys Ser Val Ser Pro Val Ser Ser Pro Leu Ser Ser
 20 25 30
 Leu Ser Ser Cys Asp Ser Val Phe Pro Lys Gln Gln Pro Asn Leu Asn
 35 40 45
 Pro Asp Leu Cys Ser Ser Trp Ile Val Asn Pro Met Gly Leu Glu Gln
 50 55 60
 Ser Gly Ser Ile Gly Leu Asn Arg Leu Ser His Ser Gln Ile Gln His
 65 70 75 80
 Ile Gln Asp Glu Met Leu Leu Arg Arg Gln Asn Gln Glu Leu Trp Leu
 85 90 95
 Ala Ser Ala Val Lys Ser Pro Leu Gln His Glu Lys Phe Asp Gln Cys
 100 105 110

Arg Tyr Gln Asn His His Gly Ser Pro His Leu Leu Arg Pro Lys Ala
 115 120 125
 Leu Ser Met Lys Arg Val Gly Val Pro Pro Lys Pro Asn Lys Leu Tyr
 130 135 140
 Arg Gly Val Arg Gln Arg His Trp Gly Lys Trp Val Ala Glu Ile Arg
 145 150 155 160
 Leu Pro Lys Asn Arg Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala
 165 170 175
 Glu Glu Ala Ala
 180

<210> 835

<211> 234

<212> PRT

<213> Eucalyptus grandis

<400> 835

Arg Glu Arg Glu Arg Gly Arg Gly Val Met Asp Leu Phe Phe His Glu
 1 5 10 15
 Glu Val Gln Ser Asp Ile Phe Trp Cys Asp Gln Leu Val Glu Pro Pro
 20 25 30
 Pro Pro Pro Pro Pro Pro Leu Pro Pro Ala Asn Pro Ser Ala Phe Ser
 35 40 45
 Pro Tyr Thr Asn Arg Leu Pro Ser Gln Asp Arg Gly Phe Met Pro Asn
 50 55 60
 Pro Gly Asn Asn Met Asn Lys Arg Val Met Glu Phe Leu Arg Arg Ser
 65 70 75 80
 Trp Ala Glu Pro Ser Gln Ile Gln Glu Phe Asp Arg Glu Arg Gly Phe
 85 90 95
 Arg His Met Leu Ser Glu Arg Met Arg Arg Glu Lys Gln Lys Arg Ser
 100 105 110
 Tyr Ser Ala Leu Leu Ser Glu Leu Pro His Gly Thr Lys Asn Asp Lys
 115 120 125
 Asn Ser Ile Val Gln Thr Ala Cys Met Arg Ile Lys Glu Leu Val Lys
 130 135 140
 Tyr Lys Gln Glu Leu Glu Arg Gln Asn Gly Glu Leu Lys Ser Gly Leu
 145 150 155 160
 Asn Glu Lys Ser Gly Gly Asp Lys Ala Glu Gly Thr Lys Ile Arg Val
 165 170 175
 Lys Ile Ala Asn Pro Thr Ser Gly Ile Asp Ser Met Leu Glu Val Leu
 180 185 190
 Lys Cys Leu Asp Asn Met Gly Leu Lys Ala Thr Ala Ile Gln Thr Gln
 195 200 205
 Cys Ser Ala Asp Gln Leu Phe Ala Val Ile Glu Val Glu Asn Glu Val
 210 215 220
 Cys Ala Gln Gln Ser Asp Ala Asn Val His
 225 230

<210> 836

<211> 59

<212> PRT

<213> Eucalyptus grandis

<400> 836

His Gly Ala Thr Trp Arg Arg Lys Glu Ala Asn Gly Gly Ser Glu Ala
 1 5 10 15
 Ser Asp Ala Val Leu Pro Arg Ala His His Arg His Arg Tyr Lys Gly
 20 25 30
 Val Arg Met Arg Lys Trp Gly Lys Trp Val Ala Glu Ile Arg Gln Pro
 35 40 45
 Asn Ser Arg Asp Arg Ile Trp Leu Gly Ser Tyr

50

55

<210> 837
 <211> 38
 <212> PRT
 <213> Eucalyptus grandis

<400> 837
 Glu Leu Leu Gln Ile Gln Arg Lys Arg Lys Arg Met Glu Ser Asn Arg
 1 5 10 15
 Glu Ser Ala Lys Arg Ser Arg Leu Arg Lys Gln Gln His Leu Asp Glu
 20 25 30
 Leu Thr Thr Glu Val Gly
 35

<210> 838
 <211> 167
 <212> PRT
 <213> Eucalyptus grandis

<400> 838
 Met Ala Pro Arg Glu Lys Pro Ser Val Ala Ala Ile Pro Asn Pro Asn
 1 5 10 15
 Gly Ala Lys Glu Ile Arg Phe Arg Gly Val Arg Lys Arg Pro Trp Gly
 20 25 30
 Arg Tyr Ala Ala Glu Ile Arg Asp Pro Gly Lys Lys Thr Arg Val Trp
 35 40 45
 Leu Gly Thr Phe Asp Thr Ala Glu Glu Ala Ala Arg Ala Tyr Asp Thr
 50 55 60
 Ala Ala Arg Glu Phe Arg Gly Ala Lys Ala Lys Thr Asn Phe Pro Thr
 65 70 75 80
 Ser Ala Glu Leu Ile Ser Ser Ser Arg Ser Pro Ser Gln Ser Ser Ser
 85 90 95
 Leu Asp Glu Pro Ser Pro Pro Pro Pro Ala Gly Ala Val Gln Ala Ala
 100 105 110
 Ala Leu Gly Pro Pro Leu Asp Leu Ser Leu Gly Arg His Pro Val Ala
 115 120 125
 Ala Ala Ala Ala Gly Pro Gly Pro Tyr Phe Pro Gly Ala Ala Met
 130 135 140
 Cys Phe Pro Val Met Pro Pro Pro Arg Pro Val Phe Phe Phe Asp
 145 150 155 160
 Pro Phe Gly Arg Met Glu His
 165

<210> 839
 <211> 84
 <212> PRT
 <213> Eucalyptus grandis

<400> 839
 Cys Leu Gly Leu Ser Ser Val Ala Ala Asn Ala Glu Lys Leu Ala Ala
 1 5 10 15
 Leu Gln Asn Glu Tyr His Phe Ala Lys Ala Arg Ile Asp Glu Asp His
 20 25 30
 Glu Lys Ala Gln Arg Leu Glu Lys Lys Val Lys Thr Leu Thr Phe Gly
 35 40 45
 Tyr Gln Met Arg Glu Lys Thr Leu Arg Asp Gln Ile Glu Ser Thr Phe
 50 55 60
 Lys Gln Leu Asp Thr Ala Gly Thr Glu Leu Glu Cys Phe Pro Ala Leu
 65 70 75 80
 Gln Lys Gln Glu

<210> 840
 <211> 157
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 840
 Pro Ser Ser Pro Val Ser Thr Lys Thr His Pro Pro Tyr Leu Cys Thr
 1 5 10 15
 Arg Pro Thr Arg Leu Ser Gln Gly Leu Arg Tyr Arg Arg Leu Ala Ala
 20 25 30
 Lys His Glu Glu Lys Pro Ser Ala Val Leu Asp Lys Ser Gln Asp Pro
 35 40 45
 Thr Asp Ser Ala Lys Pro Ser Lys Lys Pro Arg His Arg His Ser Pro
 50 55 60
 Thr Gln Leu Ala Ala Leu Asn Glu Leu Phe Glu Lys Ser Glu His Pro
 65 70 75 80
 Thr Leu Glu Glu Arg Gly Gln Leu Ala Glu Lys Leu Gly Met Glu Thr
 85 90 95
 Lys Thr Val Asn Ala Trp Phe Gln Asn Lys Arg Ala Ser Thr Lys Lys
 100 105 110
 Arg Asn Lys Gly Gly Thr Ser Glu Pro His Pro Ala Thr Ser Gln Asn
 115 120 125
 Asp Leu Ser Glu Asp Ala Leu Lys Thr Pro Ser Ala Leu Pro Ser Ile
 130 135 140
 Ala Asn Leu Leu Asn Asp Ala Pro Ser Ser Ala Ser Pro
 145 150 155

<210> 841
 <211> 86
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 841
 Tyr Leu His Asn Pro Met Arg Lys Arg Gln Arg Thr Leu Asp Met His
 1 5 10 15
 Ala Gly Ala Pro Gly Pro Asn Asp Ala Ile Asp Ala Asn Ser Val Gly
 20 25 30
 Asp Asn Ala Phe Ile Ala Asp His Asp Ala Ile Asp Ser Ala Gly Asp
 35 40 45
 Asp Asp Asp Asp Glu Asp Lys Pro Lys Thr Gly Gln Lys Gln Gly Arg
 50 55 60
 Arg Lys Ile Lys Ile Glu Phe Ile Gln Asp Lys Ser Arg Arg His Ile
 65 70 75 80
 Thr Phe Ser Lys Arg Lys
 85

<210> 842
 <211> 201
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 842
 Asp His Val Pro Ser Ser Ser Ala Leu Asp Ser Arg Ser Ser Asn
 1 5 10 15
 Arg Thr Ser Gly Val Thr Leu Ala Glu Val Leu Pro Thr Pro Gly Gln
 20 25 30
 Ser Lys Ser Ser Ala Asp Ser Gly Phe Cys Val Ser His Leu Gly Gly
 35 40 45
 Val Pro Asp Ser Gln Ser Ser Ser Tyr Ala Ala Glu His Val Asn Thr

50 55 60
 His Gln Thr Gln Glu Ile His Leu Pro Val Pro Gln Asp Asn Ala Asp
 65 70 75 80
 Leu Pro Asp Ala Asn Phe Leu Val Ser Glu Thr Ala Ser Pro Asp Tyr
 85 90 95
 Leu Glu Thr Leu Ser Ala Ala Leu Asp Gly Thr Met Asp Val Glu Ser
 100 105 110
 Asp Ala Phe Ser Ser Glu Arg Asp Ala Gly Ile Met Leu Asp Asp Val
 115 120 125
 Thr Asn Leu Pro Ala Ile Ser Asp Val Phe Trp Glu Gln Phe Leu Ala
 130 135 140
 Ala Ser Pro Leu Thr Ala Asp Thr Glu Glu Ile Ser Ser Thr Ser His
 145 150 155 160
 Glu Thr Gly Ile Thr Asn Asp Gln Glu Ser His Thr Lys Val Glu Asn
 165 170 175
 Gly Phe Glu Lys Ala His Tyr Met Asp His Leu Thr Lys Gln Met Gly
 180 185 190
 His Leu Thr Ser Asn Asn Gly Thr Gly
 195 200

<210> 843
 <211> 187
 <212> PRT
 <213> Eucalyptus grandis

<400> 843
 Phe Ser Thr Pro Pro His Pro Glu Ser Asn Pro Ile Pro Ser Leu
 1 5 10 15
 Pro Pro Ser Leu Phe Phe Pro Gln Ser Phe Val Ala Phe Ser Ser Thr
 20 25 30
 His Ala Pro Gln Ser Pro Thr Pro Ser Ile Lys Leu Lys His His His
 35 40 45
 Leu Lys Lys Lys Glu Gly Lys Lys Glu Arg Arg Thr Gly Asp Pro Thr
 50 55 60
 Glu Gly Arg Ala Arg Thr Arg His Gly Thr Ile Pro Leu Leu Arg Glu
 65 70 75 80
 Gly Ala His Gln Gln Gly Arg Val Asp Gln Gly Arg Gly Pro Ala Pro
 85 90 95
 His Arg Leu His Pro Pro Pro Arg Arg Arg Leu Leu Ala Leu Pro Pro
 100 105 110
 Gln Ile Cys Arg Ala Ser Gln Val Arg Gln Glu Leu Gln Ala Gln Val
 115 120 125
 Asp Lys Leu Pro Pro Pro Arg Pro Gln Arg Gly Asn Phe Thr Glu Glu
 130 135 140
 Glu Asp Glu Leu Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp
 145 150 155 160
 Ser Leu Ile Ala Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys
 165 170 175
 Asn Tyr Trp Asn Thr His Ile Lys Arg Lys Ala
 180 185

<210> 844
 <211> 112
 <212> PRT
 <213> Eucalyptus grandis

<400> 844
 Met Glu Met Lys Gly Gly Val Val Pro Lys Glu Glu Glu Ala Ser Ser
 1 5 10 15
 Asp Val Gly Gln Pro Pro Pro Pro Pro Pro Pro Pro Gln Pro Met
 20 25 30

```

Glu Gly Leu Gly Glu Ala Glu Ala Pro Phe Leu Thr Lys Thr Phe
   35                               40
Glu Ile Val Glu Asp Pro Ala Thr Asp Pro Ile Val Ser Trp Ser Glu
   50                               55
Gly Arg Asn Ser Phe Ile Val Trp Asp Ala His Gln Phe Ala Val Thr
   65                               70
Leu Leu Pro Lys His Phe Lys His Gly Asn Phe Ser Ser Phe Ile Arg
   85                               90
Gln Leu Asn Thr Tyr Gly Val Phe Asp Glu Tyr Asp Thr Ala Ser Phe
   100                              105

```

<210> 845

<211> 76

<212> PRT

<213> Eucalyptus grandis

<400> 845

```

Met Thr Gly Asn Phe Gly Trp Gly Ser Asn Ser Met Glu Glu Ala Trp
   1                               5
Arg Lys Gly Pro Trp Thr Ala Glu Glu Asp Lys Leu Leu Ile Glu Tyr
   20                               25
Val Lys Leu His Gly Glu Gly Arg Trp Asn Ser Val Ala Arg Leu Thr
   35                               40
Gly Leu Lys Arg Asn Gly Lys Ser Cys Arg Leu Arg Trp Val Asn Tyr
   50                               55
Leu Arg Pro Asp Leu Lys Arg Gly Gln Ile Thr Pro
   65                               70

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<210> 846

<211> 142

<212> PRT

<213> Eucalyptus grandis

<400> 846

```

Met Asn Ser Asn Ala Ser Ser Asn Pro Gln Ser Met Ala Thr Ser Thr
   1                               5
Thr Ser Ala Thr Thr Pro Ala Ala Gly Gly Asp Gly Gly Lys Lys Val
   20                               25
Arg Lys Pro Tyr Thr Ile Thr Lys Ser Arg Glu Ser Trp Thr Glu Glu
   35                               40
Glu His Asp Lys Phe Leu Glu Ala Leu Gln Leu Phe Asp Arg Asp Trp
   50                               55
Lys Lys Ile Glu Asp Phe Val Gly Ser Lys Thr Val Ile Gln Ile Arg
   65                               70
Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln Lys Asn Gly Ala Val
   85                               90
Ala His Val Pro Pro Arg Pro Lys Arg Lys Ala Ala His Pro Tyr
   100                              105
Pro Gln Lys Ala Ser Lys Asn Val Leu Val Pro Leu Gln Ala Ser Met
   115                              120
Ala Gln Pro Ser Ser Thr Asn Pro Ala Phe Thr Ile Thr Pro
   130                              135

```

<210> 847

<211> 84

<212> PRT

<213> Eucalyptus grandis

<400> 847

```

Met Lys Met Ala Glu Arg Ser Asn Ser Ser Asp Pro Glu Thr Ser Pro
   1                               5

```



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Ser Asn Ser Pro Ser Thr Ser Ser Ser Ser Ser Tyr Ser Pro Asp
    20      25      30
Pro Arg Arg Arg Ala Gly Ser Pro Ala Ala Ala Arg Asp Pro Leu Arg
    35      40      45
Ser Ser Lys Arg Ser Lys His Pro Val Tyr Arg Gly Val Arg Met Arg
    50      55      60
Asn Trp Gly Lys Trp Val Ser Glu Ile Arg Glu Pro Arg Lys Lys Ser
    65      70      75      80
Arg Ile Trp Leu

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<210> 848
<211> 60
<212> PRT
<213> Eucalyptus grandis

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<400> 848
Lys Trp Arg Ser Arg Phe Arg Met Ala Gly Phe Gln Gln Phe Pro Leu
    1      5      10      15
Ser Ser Ala Val Thr Asp Ala Val Arg Asn Leu Leu Arg Glu Tyr Asn
    20      25      30
Glu Asn Tyr Arg Ile Glu Glu Lys Asp Gly Ala Leu Tyr Leu Trp Trp
    35      40      45
Arg Asn Arg Ala Met Ala Thr Ser Ser Ala Trp Trp
    50      55      60

```

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<210> 849
<211> 90
<212> PRT
<213> Eucalyptus grandis

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```

<400> 849
Gly Val Gly Phe Pro Asp Pro Gly Pro Asp Asn Gly Gln Val Leu Asp
    1      5      10      15
Ala Arg Asp Pro Leu Ala Glu Lys Lys Leu Glu Leu Ala Thr Cys Gln
    20      25      30
Arg Arg Val Glu Glu Glu Met Leu Lys His Ser Lys Ala Val Glu Val
    35      40      45
Thr Arg Thr Ser Thr Leu Asn Asn Leu Gln Thr Gly Leu Pro Gly Val
    50      55      60
Phe Gln Ala Leu Ala Ser Phe Ser Ser Leu Phe Met Glu Val Leu Asp
    65      70      75      80
Thr Val Cys Thr Arg Ser Tyr Ala Ile Lys
    85      90

```

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<210> 850
<211> 52
<212> PRT
<213> Eucalyptus grandis

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```

<400> 850
Met Ala Ala Pro Pro Ala Glu Gln Ser Gly Ser Ala Ser Gly Gly Glu
    1      5      10      15
Ser Gln Arg Ser Val Pro Thr Pro Phe Leu Thr Lys Thr Tyr Gln Leu
    20      25      30
Val Asp Asp Pro Ala Ile Asp Ala Val Ile Ser Trp Asn Gly Asp Gly
    35      40      45
Ser Ser Phe Ile
    50

```

```

<210> 851

```

<211> 52
 <212> PRT
 <213> Eucalyptus grandis

<400> 851
 Met Asp Pro Met Asp Ile Val Gly Lys Ser Lys Glu Asp Ala Ser Leu
 1 5 10 15
 Pro Lys Ala Thr Met Thr Lys Ile Ile Lys Glu Met Leu Pro Pro Asp
 20 25 30
 Val Arg Val Ala Arg Asp Ala Gln Asp Leu Leu Ile Glu Cys Cys Val
 35 40 45
 Glu Phe Ile Asn
 50

<210> 852
 <211> 121
 <212> PRT
 <213> Eucalyptus grandis

<400> 852
 Met Asn Ser Pro Leu Ala Gln Leu Val Asn Pro Arg Arg Met His Thr
 1 5 10 15
 Tyr Glu Pro Phe Asp Gln Phe Pro Met Trp Gly Asp Thr Phe Lys Ala
 20 25 30
 Asp Lys Val Lys Asn Leu Glu Ala Ser Ser Val Ile Val His Ala
 35 40 45
 Val Asp Asp Gly Leu Asp Lys Lys Phe Glu Tyr Val Ser His Glu Ser
 50 55 60
 Ala Glu Asn Ser Ser Ser Arg Ser Asp Gln Glu Ala Asn Arg Pro Asp
 65 70 75 80
 Lys Val Gln Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser
 85 90 95
 Arg Leu Arg Lys Lys Tyr Val Gln Gln Leu Glu Ser Ser Arg Leu
 100 105 110
 Lys Leu Ala Gln Leu Glu Leu Glu Leu
 115 120

<210> 853
 <211> 293
 <212> PRT
 <213> Eucalyptus grandis

<400> 853
 Phe Val Tyr Gly Ile Ile Pro Glu Lys Gly Lys Pro Val Ser Gly Ala
 1 5 10 15
 Ser Asp Asn Leu Arg Ala Trp Trp Lys Glu Lys Val Arg Phe Asp Arg
 20 25 30
 Asn Gly Pro Ala Ala Ile Ala Lys Tyr Arg Ala Asp His Ser Ile Pro
 35 40 45
 Gly Asn Gly Glu Asp Ala Ala Thr Ile Gly Pro Ile Pro His Thr Leu
 50 55 60
 Gln Glu Leu Gln Asp Thr Thr Leu Gly Ser Leu Leu Ser Ala Leu Met
 65 70 75 80
 Gln His Cys Asn Pro Pro Gln Arg Arg Phe Pro Leu Glu Lys Gly Val
 85 90 95
 Ala Pro Pro Trp Trp Pro Thr Gly Glu Glu Glu Trp Trp Pro Gln Leu
 100 105 110
 Gly Leu Pro Ala Asp Gln Gly Pro Pro Tyr Lys Lys Pro His Asp
 115 120 125
 Leu Lys Lys Ala Trp Lys Val Ser Val Leu Thr Ala Val Ile Lys His
 130 135 140

Met Ser Pro Asp Ile Ser Lys Ile Arg Lys Leu Val Arg Gln Ser Lys
 145 150 155 160
 Cys Leu Gln Asp Lys Met Thr Ala Lys Glu Ser Ala Thr Trp Leu Ala
 165 170 175
 Ile Ile Asn Gln Glu Glu Ala Leu Ser Arg Lys Leu Tyr Pro Asn Ser
 180 185 190
 Phe Pro Pro Val Cys Ser Asp Ser Gly Phe Gly Ser Tyr Val Ile Ser
 195 200 205
 Asp Ala Ser Asp Tyr Asp Val Glu Gly Ala Asp Asp Glu Pro Lys Phe
 210 215 220
 Glu Ala Glu Glu Cys Lys Pro Phe Asp Pro Ser Ala Phe Gly Ile Gly
 225 230 235 240
 Pro Arg Val Ser Thr Gly Glu Leu Leu Ile His Pro Leu Val Ser Gln
 245 250 255
 Ile Lys Gly Glu Val Asn Glu Thr Lys Thr Asn Ser Arg Leu Val Ser
 260 265 270
 Lys Arg Asn Gln Pro Ser Asp Glu Pro Lys Ala Lys Met Asp Gln Lys
 275 280 285
 Ile Tyr Thr Cys Glu
 290

<210> 854

<211> 150

<212> PRT

<213> Eucalyptus grandis

<400> 854

Ser Thr Ser Ser Gln Arg Ala Asp Lys Ser Leu Ile Met Glu His Glu
 1 5 10 15
 Phe Ser Ser Ala Lys Ile Lys Ala Leu Leu Glu Ile Leu Gln Ser Gln
 20 25 30
 Cys Arg Gly Glu Ser Ala Asn Ala Glu Leu His Gly Pro Met Gly Cys
 35 40 45
 Asp Asp Glu Ser Leu Phe Glu Asn Thr Gly Thr Gly Asp Ser Thr Tyr
 50 55 60
 Arg Val Lys Ala Val Lys His Thr Thr Val Tyr Ser Ser Pro Pro
 65 70 75 80
 Glu Gly Pro Ile Lys Ala Ile Val Phe Ser Gln Trp Thr Ser Met Leu
 85 90 95
 Asn Leu Val Glu Gln Asn Leu Ile His Phe Gly Ile Asn Tyr Arg Arg
 100 105 110
 Leu Asp Gly Thr Met Thr Leu Ser Ala Arg Asp Lys Ala Val Lys Asp
 115 120 125
 Phe Asn Thr Asp Pro Glu Ile Val Val Met Leu Met Ser Leu Lys Ala
 130 135 140
 Gly Asn Leu Gly Leu Asn
 145 150

<210> 855

<211> 92

<212> PRT

<213> Eucalyptus grandis

<400> 855

Ser Glu Phe Gly Gly Glu Leu Met Asn Pro Arg Ser Asn Trp Leu Ile
 1 5 10 15
 Val Tyr Asn Asp Asp Glu Gly Asp Met Met Leu Val Gly Asp Asp Pro
 20 25 30
 Trp Gln Glu Phe Cys Gly Ile Val Arg Lys Ile Phe Ile Tyr Thr Arg
 35 40 45
 Glu Glu Val Gln Lys Met Lys Pro Gly Thr Ile Ser Ala Lys Asp Glu

```

50          55          60
Asp Asn Leu Met Val Asp Glu Gly Val Phe Ser Lys Lys Met Thr Ser
65          70          75          80
Asp Thr Leu Pro Ser Ala Ser Asp Pro Lys Asn Cys
          85          90

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<210> 856
 <211> 74
 <212> PRT
 <213> Eucalyptus grandis

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<400> 856
Ile Glu Ala Leu Lys Lys Arg Leu Asp Val Asn Ala Lys Tyr Ala
1          5          10          15
Val Ser Val Glu Phe Thr Lys Ala Met Ala Leu Asn His Leu Lys Asn
          20          25          30
Gly Leu Pro Arg Val Phe Lys Ala Leu Met Glu Phe Ser Gly Ala Cys
          35          40          45
Thr Lys Val Phe Glu Ala Leu Asn Asn Pro Arg Glu Gln Val Gly Ser
50          55          60
Arg Glu Asn Glu Pro Arg Val Leu Pro Ala
65          70

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<210> 857
 <211> 125
 <212> PRT
 <213> Eucalyptus grandis

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<400> 857
Gln Ile Leu Pro Pro Asn Ala Lys Ile Ser Lys Glu Ala Lys Glu Thr
1          5          10          15
Met Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Val Thr Gly Glu Ala
          20          25          30
Ser Asp Lys Cys His Lys Glu Lys Arg Lys Thr Val Asn Gly Asp Asp
          35          40          45
Ile Val Trp Ala Leu Gly Ser Leu Gly Phe Asp Asp Tyr Ala Glu Pro
50          55          60
Leu Lys Arg Tyr Leu Asn Arg Tyr Arg Glu Val Glu Gly Glu Arg Ala
65          70          75          80
Ser Gln Asn Lys Val Thr Gly Gly Glu Ser Arg Asn Glu Lys Asn Leu
          85          90          95
Tyr Gly Asp Glu Ser Pro Glu Lys Gln Leu Gly Ala Ala Ser Ser Ser
          100          105          110
Pro Leu Lys Phe Phe Asp Val Ala Asp Arg Ser Thr Asn
          115          120          125

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<210> 858
 <211> 113
 <212> PRT
 <213> Eucalyptus grandis

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<400> 858
Val Asn Ser Val Phe Glu Leu His Lys Leu Leu Ala Arg Pro Gly Ala
1          5          10          15
Ile Glu Lys Val Leu Gly Val Val Arg Gln Val Arg Pro Ala Ile Val
          20          25          30
Thr Val Val Glu Gln Glu Ala Asn His Asn Gly Pro Val Phe Val Asp
          35          40          45
Arg Phe Asn Glu Ser Leu His Tyr Tyr Ser Thr Leu Phe Asp Ser Leu
50          55          60
Glu Gly Cys Ala Ser Thr Gln Asp Lys Ala Met Ser Glu Val Tyr Leu

```

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65          70          75          80
Gly Lys Gln Ile Cys Asn Val Val Ala Cys Glu Gly Ala Asp Arg Val
      85          90          95
Glu Arg His Glu Thr Leu Ala Gln Trp Arg Val Arg Leu Gly Gly Ala
      100        105        110
Gly

```

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<210> 859
<211> 114
<212> PRT
<213> Eucalyptus grandis

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<400> 859
Ser Leu Phe Asn Thr Ser Lys Ser Asn Lys His Leu Trp Glu Gln Ile
 1          5          10          15
Ser Ser Lys Met Arg Glu Lys Gly Phe Asp Arg Ser Pro Thr Met Cys
      20          25          30
Thr Asp Lys Trp Arg Asn Leu Leu Lys Glu Tyr Lys Lys Ala Lys Tyr
      35          40          45
Gln Asp Arg Gly Ser Ala Lys Met Ser Tyr Tyr Lys Glu Ile Glu Glu
      50          55          60
Ile Leu Arg Glu Arg Ser Lys Asn Asn Gln Tyr Lys Ser Pro Thr Ala
      65          70          75          80
Ser Ala Leu Lys Val Asp Pro Tyr Met Gln Phe Ser Asp Lys Gly Ile
      85          90          95
Glu Asp Ala Gly Met Thr Phe Gly Pro Val Glu Ala Ser Gly Arg Pro
      100        105        110
Thr Leu

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<210> 860
<211> 181
<212> PRT
<213> Eucalyptus grandis

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<400> 860
Asp Leu Glu Leu Lys Val Arg Glu Leu Glu Thr Val Met Leu Gly Pro
 1          5          10          15
Ser Ser Asp Met Pro His Thr Val Asp Ile Asn Phe Leu Val Gly Ser
      20          25          30
Gly Gln Met Ser Gln Glu Thr Glu Thr Leu Met Glu Ile Ser Arg
      35          40          45
Arg Asp Leu Lys Glu Ile Leu Cys Ala Cys Ala Lys Ala Val Glu Asp
      50          55          60
Asn Asp Thr Leu Lys Phe Glu Cys Leu Ile Ser Glu Leu Arg Pro Met
      65          70          75          80
Val Ser Val Ser Gly Asp Pro Ile Gln Arg Leu Ser Ala Tyr Met Leu
      85          90          95
Glu Gly Leu Ile Ala Arg Leu Ala Ser Ser Gly Ser Ser Ile Tyr Lys
      100        105        110
Ala Leu Lys Cys Lys Glu Pro Ala Gly Ala Glu Leu Leu Ser Tyr Met
      115        120        125
His Ile Leu Tyr Asp Ile Cys Pro Tyr Phe Lys Phe Gly Tyr Met Ser
      130        135        140
Ala Asn Gly Ser Ile Ala Glu Val Met Lys Asp Glu Asn Ile Ile His
      145        150        155        160
Ile Ile Asp Phe Gln Ile Ala Gln Gly Gly Gln Trp Ile Thr Leu Ile
      165        170        175
Gln Ala Leu Ala Ala
      180

```

<210> 861
 <211> 58
 <212> PRT
 <213> Eucalyptus grandis

<400> 861
 Met Ala Arg Ser Ser Cys Asn Gln Lys Leu Arg Lys Gly Leu Trp Ser
 1 5 10 15
 Pro Glu Glu Asp Glu Lys Leu Phe Asn Tyr Ile Ser Arg His Gly Leu
 20 25 30
 Gly Cys Trp Ser Ser Val Pro Lys Leu Ala Gly Leu Gln Arg Cys Gly
 35 40 45
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr
 50 55

<210> 862
 <211> 86
 <212> PRT
 <213> Eucalyptus grandis

<400> 862
 Met Ala Ser Gly Met Glu Asn Arg Gly Glu Ile Pro Ala Asn Leu Lys
 1 5 10 15
 Lys Gln Leu Ala Leu Ala Val Arg Lys Ile Gln Trp Ser Tyr Gly Ile
 20 25 30
 Phe Trp Ser Ile Ser Thr Arg Gln Pro Gly Val Leu Glu Trp Gly Asp
 35 40 45
 Gly Tyr Tyr Asn Gly Asp Ile Lys Thr Arg Lys Thr Ile Gln Ala Val
 50 55 60
 Glu Leu Asn Thr Asp Gln Ile Gly Met Gln Arg Ser Glu Gln Leu Arg
 65 70 75 80
 Glu Leu Tyr Glu Ser Leu
 85

<210> 863
 <211> 182
 <212> PRT
 <213> Eucalyptus grandis

<400> 863
 Asn Ile Gln Arg Asn Glu Tyr His Asn Leu Phe Asn Phe Ile Ser Gly
 1 5 10 15
 Lys Gly Leu Lys Ile Met Asn Leu Gly Glu Gln Gly Ala Asp Gly Val
 20 25 30
 Pro Gly Val Leu Asp Val Asp Asp Ala Val Asp Pro His Leu
 35 40 45
 Glu Arg Ile Arg Ile Glu Ala Gly Val Asp Glu Ser Asp Glu Glu Asp
 50 55 60
 Glu Asp Phe Val Ile Asp Lys Asp Asp Gly Gly Ser Pro Thr Asp Asp
 65 70 75 80
 Ser Gly Asp Asp Glu Ser Asp Val Ser Glu Ser Gly Asp Glu Lys Glu
 85 90 95
 Lys Glu Lys Tyr Gly Lys Lys Glu Ser Arg Lys Glu Val Lys Ala Ser
 100 105 110
 Ser Ser Lys Lys Lys Ala Lys Ala Gly Asp Glu Glu Gly Ser Lys Lys
 115 120 125
 Lys Lys Gln Lys Lys Lys Asp Pro Asn Ala Pro Lys Lys Ala Met Ser
 130 135 140
 Gly Tyr Asn Phe Phe Leu Gln Thr Glu Ser Glu Lys Met Lys Arg Thr
 145 150 155 160

Asn Pro Gly Leu Ser Phe Gly Asp Val Ser Arg Glu Ile Ala Asp Lys
 165 170 175
 Trp Arg Gly Leu Ser Ala
 180

<210> 864
 <211> 55
 <212> PRT
 <213> Eucalyptus grandis

<400> 864
 Met Ser Phe Thr Gly Thr Gln Val Lys Cys Lys Ala Cys Glu Lys Thr
 1 5 10 15
 Val Tyr Pro Val Glu Gln Leu Ser Ala Asp Gly Val Ala Tyr His Lys
 20 25 30
 Tyr Cys Phe Lys Cys Ser His Cys Lys Gly Thr Leu Lys Leu Ser Ser
 35 40 45
 Tyr Ser Ser Met Glu Gly Val
 50 55

<210> 865
 <211> 151
 <212> PRT
 <213> Eucalyptus grandis

<400> 865
 Asp Lys Ser Ser Ser Pro Val Pro Pro Gln Asp Gln Thr Gly Val His
 1 5 10 15
 Val Tyr His Pro Asp Trp Ala Ala Met His Ala Tyr Tyr Gly Pro Arg
 20 25 30
 Val Ala Leu Pro Pro Tyr Tyr Asn Ser Ala Val Ser Ser Gly His Gly
 35 40 45
 Pro His Pro Tyr Met Trp Gly Pro Pro Gln Pro Met Met Pro Pro Tyr
 50 55 60
 Gly Pro Pro Tyr Ala Ala Ile Tyr Ser His Gly Gly Val Tyr Gly His
 65 70 75 80
 Pro Ala Ile Pro Leu Thr Pro Thr Pro Leu Ala Ala Glu Thr Pro Lys
 85 90 95
 Lys Ser Ser Ala Asn Ser Asp Asn Gly Leu Val Lys Lys Leu Lys Ser
 100 105 110
 Phe Glu Gly Leu Ala Met Ser Ile Gly Ser Gly Gly Asp Ala Asp Ser
 115 120 125
 Ala Asp Asp Gly Thr Asp Lys Arg Ser Ser Gln Ser Ala Asp Ser Gly
 130 135 140
 Asp Ser Ser Asp Glu Asp Gln
 145 150

<210> 866
 <211> 203
 <212> PRT
 <213> Eucalyptus grandis

<400> 866
 Arg Phe Lys Gln Leu Leu Glu Glu Ala Ser Gln Asp Ile Asp His Thr
 1 5 10 15
 Thr Asp Tyr Tyr Thr Phe Arg Lys Lys Trp Gly Asn Asp Pro Arg Phe
 20 25 30
 Glu Ala Leu Asp Arg Lys Asp Arg Glu Asn Leu Leu Asn Glu Arg Val
 35 40 45
 Leu Pro Leu Lys Lys Ala Ala Glu Glu Arg Ala Gln Ala Met Arg Ala
 50 55 60

Ala Ala Thr Ser Ser Phe Lys Ser Leu Leu Arg Asp Arg Gly Asp Ile
 65 70 75 80
 Thr Val Asn Ser Arg Trp Ser Arg Val Lys Asp Ser Leu Arg Asp Asp
 85 90 95
 Pro Arg Tyr Lys Ser Val Lys His Glu Asp Arg Glu Ala Leu Phe Asn
 100 105 110
 Glu Tyr Ile Ala Glu Leu Lys Ala Val Glu Asp Arg Glu Glu Lys Glu
 115 120 125
 Ala Lys Ala Lys Arg Glu Glu Gln Glu Lys Leu Lys Glu Arg Glu Arg
 130 135 140
 Glu Leu Arg Lys Arg Lys Glu Arg Glu Glu Gln Glu Met Glu Arg Val
 145 150 155 160
 Arg Val Lys Ile Arg Arg Lys Glu Ala Ile Ala Ser Phe Gln Ala Leu
 165 170 175
 Leu Val Glu Thr Ile Lys Asp Pro Gln Leu Pro Gly Gln Ser Gln Lys
 180 185 190
 Leu Asn Leu Thr Lys Ile Leu Arg Thr Cys Glu
 195 200

<210> 867

<211> 113

<212> PRT

<213> Eucalyptus grandis

<400> 867

Glu Ile Lys Asn Tyr Trp Asn Thr Arg Ile Lys Arg Leu Gln Arg Thr
 1 5 10 15
 Gly Met Pro Ile Tyr Pro Thr Glu Val Cys Leu Gln Val Ser Ser Glu
 20 25 30
 Asn Gln Glu Thr His Asn Met Gly Asn Leu His Thr Ala Gly Glu Asp
 35 40 45
 Asn Cys Asp Leu Ser Gln Ala Asp Pro Leu Glu Ile Pro Glu Val Asp
 50 55 60
 Phe Arg Lys Leu Glu Leu His Leu Gly Phe Ser Ser Phe Trp Ser Thr
 65 70 75 80
 Leu Leu Asp Val Pro Cys Gly Phe Gly Arg Glu Ala Met Cys Leu
 85 90 95
 Ser Asp Ala Tyr Cys Leu Pro Phe Pro Ser Ser Arg Ser Pro Lys Arg
 100 105 110
 Leu

<210> 868

<211> 107

<212> PRT

<213> Eucalyptus grandis

<400> 868

Thr Thr Arg Ile Pro Ala Ala Asn Leu Glu Asp Leu Phe Asp Asn His
 1 5 10 15
 Asn Met Ala Arg Ile Arg Asp Val Trp Ala Pro Asn Leu Glu Ile Glu
 20 25 30
 Met Gln Asn Ile Arg Glu Ala Ile Glu Lys Tyr Ser Tyr Val Ser Met
 35 40 45
 Asp Thr Glu Phe Leu Ser Gly Ala Arg Pro Ile Gly Asn Phe Lys Thr
 50 55 60
 Ser Ser Asp Tyr His Tyr Gln Thr Met Arg Cys Asn Val Asp Leu Leu
 65 70 75 80
 Lys Ile Ile Gln Val Gly Ile Thr Leu Ala Asp Glu Glu Gly Leu Phe
 85 90 95
 Pro Gln Asp Cys Ser Thr Trp Gln Val Gln Leu

100

105

<210> 869
 <211> 85
 <212> PRT
 <213> Eucalyptus grandis

<400> 869

```
Met Gly Arg Ser Pro Cys Cys Glu Gly Asn Gly Leu Lys Lys Gly Pro
 1          5          10          15
Trp Ser Ser Glu Glu Asp Lys Lys Leu Leu Asp Phe Ile Gln Gln His
 20          25          30
Gly His Gly Ser Trp Ile Ser Leu Pro Lys Arg Ala Gly Leu Asn Arg
 35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Trp Pro Asp
 50          55          60
Ile Lys Arg Gly Ser Phe Ser Pro Glu Glu Glu Gln Thr Ile Leu His
 65          70          75          80
Leu His Ser Val Leu
 85
```

<210> 870
 <211> 85
 <212> PRT
 <213> Eucalyptus grandis

<400> 870

```
Met Pro Trp Lys Thr Gly Leu Thr Gly Ser Lys Thr Glu Glu Asp Lys
 1          5          10          15
Ala Leu Gln Leu Cys Arg Glu Arg Lys Lys Ser Val Arg Gln Ala Val
 20          25          30
Asp Gly Trp Gly Ser Leu Val Tyr Ala His Phe Met Phe Val Gln Ser
 35          40          45
Leu Arg Asn Val Gly Thr Ala Leu Thr Lys Phe Phe Glu Thr Glu Ser
 50          55          60
Pro Asn Gly Ser Pro Ser Tyr Ala Ser Met Ser Thr Thr Pro Glu Pro
 65          70          75          80
Ile Ala Leu Thr Glu
 85
```

<210> 871
 <211> 104
 <212> PRT
 <213> Eucalyptus grandis

<400> 871

```
Gly Leu Leu Arg Cys Ser Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr
 1          5          10          15
Leu Arg Pro Gly Ile Lys Arg Gly Ser Phe Thr Asp Gln Glu Lys
 20          25          30
Met Ile Val His Leu Gln Ala Leu Leu Gly Asn Arg Gly Ala Ala Ile
 35          40          45
Ala Ser Tyr Leu Pro Gln Arg Thr Asp Asn Asp Ile Lys Asn Tyr Trp
 50          55          60
Asn Thr His Leu Lys Lys Lys Leu Lys Lys Leu Gln Gly Gln Ala Asn
 65          70          75          80
Pro Asp Asp Asp Asp His Asn His His Pro Gln Gly Phe Asn Ala Thr
 85          90          95
Ser His Ser Asn Pro Lys Gly Gln
 100
```

<210> 872
 <211> 102
 <212> PRT
 <213> Eucalyptus grandis

<400> 872
 Met Ala Arg Thr Pro Cys Cys Glu Lys Met Gly Met Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Asp Gln Ile Leu Ile Ser His Ile His Gln Phe
 20 25 30
 Gly His Ser Asn Trp Arg Ala Leu Pro Arg Gln Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Val Lys Arg Gly Asn Phe Thr Asp Asp Glu Arg Asp Thr Ile Ile Glu
 65 70 75 80
 Leu His Gln Val Leu Gly Asn Arg Trp Ser Ala Ile Ala Ser Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn
 100

<210> 873
 <211> 125
 <212> PRT
 <213> Eucalyptus grandis

<400> 873
 Trp Thr Ala Glu Glu Asp Lys Lys Leu Ile Asn Phe Ile Leu Thr His
 1 5 10 15
 Gly Gln Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Leu Arg
 20 25 30
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp
 35 40 45
 Leu Lys Arg Gly Leu Leu Ser Glu Tyr Glu Glu Lys Met Val Ile Asp
 50 55 60
 Leu His Ala Gln Leu Gly Asn Arg Trp Ser Lys Ile Ala Ser His Leu
 65 70 75 80
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr His Ile
 85 90 95
 Lys Lys Lys Leu Lys Lys Met Gly Ile Asp Pro Leu Thr His Lys Pro
 100 105 110
 Leu Val Thr Asn Asn Asp Asn Thr Thr Asp Gln Gln Pro
 115 120 125

<210> 874
 <211> 114
 <212> PRT
 <213> Eucalyptus grandis

<400> 874
 Met Asp Lys Lys Pro Asp Asp Asp Ser Gly Lys Ser Gln Asp Val Glu
 1 5 10 15
 Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn
 20 25 30
 Tyr Ile Ala Asn His Gly Glu Gly Ser Trp Asn Ser Leu Ala Lys Ala
 35 40 45
 Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn
 50 55 60
 Tyr Leu Arg Pro Asp Val Arg Arg Gly Asn Ile Thr Thr Glu Glu Gln
 65 70 75 80
 Leu Leu Ile Met Glu Leu His Ala Lys Trp Gly Asn Arg Asp Ala His

				85						90					95				
Lys	Ser	His	Asn	Phe	Ser	Leu	His	Arg	Phe	Tyr	Asn	Ile	Ile	Ile	Pro	Ile			
			100						105					110					
Asp	His																		

<210> 875
 <211> 127
 <212> PRT
 <213> Eucalyptus grandis

Asn	Gly	Asp	Ser	Val	Lys	Asp	Asp	Leu	Asp	Thr	Asp	Glu	Tyr	Glu	Thr				
1				5					10					15					
His	Ala	Thr	Val	Leu	Asp	Lys	Leu	Leu	Ala	Trp	Glu	Lys	Lys	Leu	Tyr				
			20					25					30						
Glu	Glu	Val	Lys	Gln	Gly	Glu	His	Met	Lys	Leu	Glu	Tyr	Gln	Lys	Lys				
			35				40					45							
Val	Ala	Leu	Leu	Asn	Lys	Gln	Lys	Lys	Arg	Gly	Ala	Ser	Gly	Glu	Ser				
	50					55				60									
Leu	Glu	Lys	Thr	Lys	Ala	Ala	Val	Ser	His	Leu	His	Thr	Thr	Tyr	Ile				
	65				70				75					80					
Val	Asp	Met	Gln	Ser	Met	Asp	Ser	Thr	Ala	Ser	Glu	Ile	Asn	His	Ile				
			85					90					95						
Arg	Asp	Lys	Gln	Leu	Tyr	Pro	Lys	Leu	Ala	Gln	Leu	Val	Asp	Gly	Met				
			100				105						110						
Ala	Asn	Met	Trp	Glu	Lys	Met	Arg	Met	His	His	Asp	Lys	Gln	Glu					
		115					120					125							

<210> 876
 <211> 153
 <212> PRT
 <213> Eucalyptus grandis

Pro	Glu	Thr	Val	His	Val	Gln	Asn	Tyr	Ser	Pro	Ile	His	Gln	Met	Gly				
1				5					10					15					
Ile	Asp	Gly	Phe	Phe	Pro	Ala	His	Pro	Ser	Pro	Gln	Asn	Pro	Ser	Tyr				
			20					25					30						
His	Ser	Tyr	Ser	Pro	Asn	Asn	Arg	Pro	Asn	Phe	Pro	Pro	Pro	Ser	Pro				
			35				40				45								
Gln	Thr	Ser	Gln	Trp	Asp	Tyr	Phe	Trp	Asn	Pro	Phe	Ser	Ser	Leu	Asp				
			50			55				60									
Tyr	Tyr	Gly	Tyr	Pro	Thr	Arg	Ser	Ser	Ile	Asp	His	Met	Ala	Met	Asp				
	65				70				75					80					
Asp	Glu	Thr	Arg	Gly	Leu	Arg	Gln	Val	Arg	Glu	Glu	Glu	Gly	Ile	Pro				
			85					90					95						
Asp	Leu	Glu	Glu	Glu	Thr	Glu	His	Glu	Glu	Cys	Asp	His	His	Ser	Tyr				
			100				105						110						
Val	Asp	Glu	Asp	Arg	Gly	Asn	Arg	Asp	Ala	Asn	Phe	Pro	Thr	Glu	Glu				
			115				120					125							
Val	Leu	Val	Glu	Asp	Val	Asp	Asp	Glu	Glu	Glu	Asp	Glu	Asp	Glu	Gly				
		130				135					140								
Asn	Arg	His	Ser	Cys	Glu	Ser	Glu	Asp											
						150													

<210> 877
 <211> 62
 <212> PRT
 <213> Eucalyptus grandis

<400> 877

```

Val Leu Arg Ala Gln Leu Met Glu Leu Thr Asp Arg Leu Arg Ser Leu
 1              5              10              15
Asn Ser Val Leu Gln Val Val Glu Val Val Ser Gly Leu Ala Ile Asp
              20              25              30
Ile Pro Glu Ile Pro Asp Pro Leu Met Asn Pro Trp Gln Leu Pro Cys
              35              40              45
Pro Met Gln Pro Ile Thr Ala Ser Ala Asp Met Leu Gln Leu
              50              55              60

```

<210> 878

<211> 135

<212> PRT

<213> Eucalyptus grandis

<400> 878

```

Leu Thr Leu Thr Ala Ala Ser Thr Val Ile Phe Ala Glu Leu Ser Trp
 1              5              10              15
Thr Pro Gly Asp Leu Ile Gln Ala Glu Asp Arg Ala His Arg Ile Gly
              20              25              30
Gln Val Ser Ser Val Asn Ile Tyr Tyr Leu Leu Ala Asn Asp Thr Val
              35              40              45
Asp Asp Ile Ile Trp Asp Val Val Gln Ser Lys Leu Gln Asn Leu Gly
              50              55              60
Gln Val Leu Asp Gly His Glu Asn Thr Leu Glu Val Ser Ala Ser Gln
              65              70              75              80
Pro Thr Arg Asn Ser Pro Ala Lys Gln Lys Thr Phe Asn Ser Pro Gly
              85              90              95
Lys Gln His Thr Phe Asn Ser Pro Gly Lys Gln Gln Lys Phe Asn Ser
              100              105              110
Pro Gly Lys Gln Thr Thr Leu Asp Ser Phe Met Lys Arg Cys Asn Ser
              115              120              125
Gly Asp Pro Ser Glu His Gln
              130              135

```

<210> 879

<211> 138

<212> PRT

<213> Eucalyptus grandis

<400> 879

```

Met Ala Leu Glu Ala Ile Asn Ser Pro Thr Ala Ala Ser Ala Pro Phe
 1              5              10              15
Gln Phe Met Glu Glu Pro Leu Ser Ser Arg Phe Leu Glu Pro Leu Asn
              20              25              30
Lys Arg Lys Arg Ser Lys Arg Pro His His Pro Pro Ser Glu Asp Glu
              35              40              45
Tyr Leu Ala Leu Cys Leu Ile Met Leu Ala Arg Ser Gly Ala Ala Pro
              50              55              60
Lys Pro Asn His His Ala Ser Pro Ala Pro Leu Pro Pro Pro Pro Pro
              65              70              75              80
Pro Ala Pro Thr Lys Pro Glu Glu Ala Ala Ala Thr Ala Thr Ala Thr
              85              90              95
Ala Ala Pro Ala Asn Asn Leu Ser Tyr Lys Cys Ala Val Cys Gly Lys
              100              105              110
Gly Phe Pro Ser Tyr Gln Ala Leu Gly Gly His Lys Ala Ser His Arg
              115              120              125
Lys Ser Ala Ala Ala Ala Ala Ala Ala
              130              135

```

<210> 880

<211> 124
 <212> PRT
 <213> Eucalyptus grandis

<400> 880
 Ala Ile Ala Leu Val Leu Ala Lys Arg Glu Ile Ile Arg Ser Ile Gly
 1 5 10 15
 Thr Gly Leu Asp Trp Ser Ser Pro Ser Ala Gly Ser Ser Thr Ser Leu
 20 25 30
 Pro Glu Ile Lys Gly Thr Leu Val Ile Cys Pro Val Val Ala Val Thr
 35 40 45
 Gln Trp Val Gly Glu Ile Asn Cys Ser Thr Ala Gln Gly Ser Thr Lys
 50 55 60
 Val Leu Val Tyr His Gly Ala Asn Arg Gly Lys Thr Ala Asp Gln Phe
 65 70 75 80
 Lys Asn Phe Asp Phe Val Val Thr Thr Tyr Ser Leu Val Glu Gly Glu
 85 90 95
 Tyr Arg Lys Phe Val Met Pro Pro Lys Lys Lys Cys Ile Tyr Cys Gly
 100 105 110
 Lys Leu Leu Tyr Lys Glu Lys Met Thr Val His Leu
 115 120

<210> 881
 <211> 196
 <212> PRT
 <213> Eucalyptus grandis

<400> 881
 Pro Asp Leu Pro Gly Asp Asp Leu Ala Leu Glu Phe Glu Glu Phe Asp
 1 5 10 15
 Phe Gln Ser Leu Phe Asp Glu Leu Ser Pro Asp Ala Ala Gly Leu Leu
 20 25 30
 Asp Ala Ser Asp Val Asp Ala Ser Ser Pro Gly Ser Leu Ser Ser Trp
 35 40 45
 Ile Gly Glu Ile Glu Gly Met Leu Met Lys Asp Asp Glu Glu Ala Val
 50 55 60
 Ala Val Glu Pro Ser Gln Glu Val Phe Asp Arg Phe Phe Ala Gly Leu
 65 70 75 80
 Leu Val Asp Ser Pro Glu Gly Gly Pro Ala Glu Ala Thr Asp Gly Ala
 85 90 95
 Ser Asp Lys Glu Ser Asn Ser Ser Asp Gly Gly Gly Gly Gly Gly
 100 105 110
 Glu Arg Asp Glu Lys Leu Val Val Gly Asp Asn Glu Leu Ser Glu Asp
 115 120 125
 Ala Asp Asp Asp Pro Val Ser Lys Lys Gln Arg Arg Gln Leu Arg
 130 135 140
 Asn Lys Asp Ala Ala Ala Arg Ser Arg Glu Arg Lys Arg Ser Tyr Val
 145 150 155 160
 Lys Glu Leu Glu Met Lys Ser Lys Tyr Met Glu Gly Glu Cys Arg Arg
 165 170 175
 Leu Gly Arg Leu Leu Gln Cys Phe Val Ala Glu Asn Gln Ala Leu Arg
 180 185 190
 Leu Asn Leu Glu
 195

<210> 882
 <211> 102
 <212> PRT
 <213> Eucalyptus grandis

<400> 882

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Val Ile Ser Ser Gln Ser Met His Leu Gly Val Leu Ala Thr Ala Ser
1          5          10          15
His Ala Val Thr Thr Gln Thr Leu Phe Val Val Tyr Tyr Lys Pro Arg
20          25          30
Thr Ser Gln Phe Ile Ile Ser Leu Asn Lys Tyr Leu Glu Ala Leu Asn
35          40          45
Asn Lys Phe Thr Val Gly Met Arg Phe Lys Met Arg Phe Glu Gly Glu
50          55          60
Asp Ser Pro Glu Arg Arg Phe Ser Gly Thr Ile Val Gly Val Glu Asp
65          70          75          80
Phe Ser Pro Gln Trp Asp Asn Ser Ser Trp Arg Ser Leu Lys Val His
85          90          95
Trp Asp Glu His Ala Ser
100

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<210> 883
 <211> 69
 <212> PRT
 <213> Eucalyptus grandis

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<400> 883
Phe Asn Gln Leu Asp Pro Arg Ile Asn Arg Lys Pro Phe Ser Glu Glu
1          5          10          15
Glu Glu Glu Arg Leu Leu Thr Ala His Lys Leu Cys Gly Asn Lys Trp
20          25          30
Ala Met Ile Ala Arg Leu Phe Pro Gly Arg Thr Asp Asn Ala Val Lys
35          40          45
Asn His Trp His Val Ile Val Ala Arg Lys Gln Arg Glu Gln Ser Asn
50          55          60
Asn Ala Arg Gly Arg
65

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<210> 884
 <211> 74
 <212> PRT
 <213> Eucalyptus grandis

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<400> 884
Gln Lys Tyr Phe Ile Arg Gln Ser Asn Val Ser Lys Arg Lys Arg Arg
1          5          10          15
Ser Ser Leu Phe Asp Ile Val Ala Glu Glu Ser Val Asp Val Pro Met
20          25          30
Gly Ser Arg Asp Phe Phe Ala Val Asp Glu Gln Gln Gln Glu Thr Glu
35          40          45
Val Asn Asp Ala Leu Gln Gln Leu Pro Pro Asp Val Asp Glu Glu Cys
50          55          60
Glu Ser Met Asp Ser Thr Asn Ser Asn Thr
65          70

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<210> 885
 <211> 61
 <212> PRT
 <213> Eucalyptus grandis

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<400> 885
Ser Ser Ser Ser Arg His Glu Ser Arg His Pro Ile Pro Leu Leu Thr
1          5          10          15
Asn Gly Gln Pro Met Ser Gly Glu Ile Pro Cys Ala Ser Ile Asp Ser
20          25          30
Pro Ser Val Arg Thr Thr Ser Gly Pro Leu Gly Pro Phe Asp Lys His
35          40          45

```

Val His Ser Leu Pro Tyr Val Asp Pro Arg Gln Pro Val
50 55 60

<210> 886
<211> 142
<212> PRT
<213> Eucalyptus grandis

<400> 886
Ser Pro Pro Leu Ser Ala His Val Ala Ser His Lys Gly Leu His Gln
1 5 10 15
Ala Ser Lys Pro Lys Ile His Glu Cys Asn Ile Cys Gly Ser Glu Phe
20 25 30
Ala Ser Gly Gln Ala Leu Gly Gly His Met Arg Arg His Arg Ser Ala
35 40 45
Pro Pro Pro Thr Ala Thr Ser Ala Asp Ala Thr Ser Pro Thr Asn Pro
50 55 60
Pro Ala Ala Ala Ala Ile Thr Thr Glu Lys Ser Arg Asn Ile Leu Ser
65 70 75 80
Leu Asp Leu Asn Leu Pro Ala Pro Asn Gly Gly Ser Pro Pro Pro
85 90 95
Ser Ala Pro Pro Pro Gly Glu Leu Glu Val Pro Ile Arg His Lys Ser
100 105 110
Thr Ala His His Thr Ser Leu Ala Arg Leu Gly Gly Leu Pro Leu Leu
115 120 125
Lys Lys Lys Glu Lys Thr Gly Ser His Val Asn Gln Cys Asn
130 135 140

<210> 887
<211> 139
<212> PRT
<213> Eucalyptus grandis

<400> 887
Ala Val Ser Asp Ile Asn Leu Val Ser Asn Ser Thr His Ser Ser Tyr
1 5 10 15
Glu Asp Gly Gly Ser Pro Arg Arg Ile Thr Ser Glu Ser Asp Pro Lys
20 25 30
Asp Ala Pro Met Gly Thr Glu Ser Leu Leu Ser Ala Pro Glu Ala Val
35 40 45
Glu Leu Ser Asp Thr Gly Thr Ser Phe Thr Phe Lys Met Asp Ser Ser
50 55 60
Met Gln Arg Lys Pro Pro Val Asp Glu Ser Pro Arg Met His Pro Leu
65 70 75 80
Pro Met Asn Leu Thr Thr Glu Glu Gly Asp Asn Asn Val Ser Cys Gln
85 90 95
Leu Asn Leu Ser Leu Ala Ser Ser Leu Leu Gln Val Asp His Ser Gln
100 105 110
Gln Phe Asn Arg Leu Asn Val Leu Gly Ser Glu Thr Ser Lys Ser Pro
115 120 125
Asp Ala Arg Ser Asn Ala Ser Ile Thr Glu Ser
130 135

<210> 888
<211> 36
<212> PRT
<213> Eucalyptus grandis

<400> 888
His Pro Glu Tyr Asn Ser Ser Pro Val Gly Tyr Met Glu Thr Asn Lys
1 5 10 15

Ala Arg Leu Val Leu Glu Lys Asp Asp Leu Gly Leu Asn Leu Met Pro
 20 25 30
 Pro Ser Thr Cys
 35

<210> 889

<211> 176

<212> PRT

<213> Eucalyptus grandis

<400> 889

Asn Ile Gly Ala Lys Ala Asp Val Phe His Ile Leu Ser Gly Met Trp
 1 5 10 15
 Lys Thr Pro Ala Glu Arg Cys Phe Met Trp Leu Gly Gly Phe Arg Ser
 20 25 30
 Ser Glu Leu Leu Lys Ile Leu Gly Asn His Leu Glu Pro Leu Thr Asp
 35 40 45
 Gln Gln Leu Met Gly Ile Cys Asn Leu Gln Gln Ser Ser Gln Gln Ala
 50 55 60
 Glu Asp Ala Leu Ser Gln Gly Met Glu Ala Leu Gln Gln Ser Leu Val
 65 70 75 80
 Asp Thr Leu Ser Ser Thr Thr Leu Ser Pro Thr Gly Ser Gly Asn Val
 85 90 95
 Ala Glu Tyr Met Gly Gln Met Ala Ile Ala Met Gly Lys Leu Ala Thr
 100 105 110
 Leu Glu Asn Phe Val His Gln Ala Asp Leu Leu Arg Gln Gln Thr Leu
 115 120 125
 Gln Gln Met His Arg Ile Leu Thr Thr Arg Gln Ala Ala Arg Ala Leu
 130 135 140
 Leu Val Ile Asn Asp Tyr Ile Ser Arg Leu Arg Ala Leu Ser Ser Leu
 145 150 155 160
 Trp Leu Ala Arg Pro Arg Thr Glu Asn Ile Cys Ser Ala Lys Leu Phe
 165 170 175

<210> 890

<211> 33

<212> PRT

<213> Eucalyptus grandis

<400> 890

Lys Lys Arg Leu Met Val Ala Ser Ala Phe Gly Glu Asp Glu Lys Ala
 1 5 10 15
 Gly Arg Gln Thr Arg Leu Thr Val Glu Asp Leu Asn Tyr Leu Phe Met
 20 25 30
 Ala

<210> 891

<211> 51

<212> PRT

<213> Eucalyptus grandis

<400> 891

Met Arg Asp Leu Cys Leu Asp Gln Arg Glu Met Ala Ser Gly Ser Ser
 1 5 10 15
 Arg Val Glu Ala Arg Ala Asp Ala Glu Met Ala Leu Tyr Asn Glu Leu
 20 25 30
 Trp Gln Ala Cys Ala Gly Pro Leu Val Ala Val Pro Arg Gln Gly Glu
 35 40 45
 Arg Val Phe
 50

<210> 892
 <211> 77
 <212> PRT
 <213> Eucalyptus grandis

<400> 892
 Met Leu Ser Pro Ser Gly Ser Ser Pro Leu Ala Gln Ser Thr Gly Arg
 1 5 10 15
 His Pro Leu Tyr Arg Gly Val Arg Ser Arg Ser Gly Lys Trp Val Ser
 20 25 30
 Glu Ile Arg Glu Pro Arg Lys Thr Thr Arg Ile Trp Leu Gly Thr Tyr
 35 40 45
 Pro Asn Pro Glu Met Ala Ala Ala Phe Asp Val Ala Ala Leu Ala
 50 55 60
 Leu Lys Gly Ser Asp Ala Ala Leu Asn Phe Pro His Asp
 65 70 75

<210> 893
 <211> 95
 <212> PRT
 <213> Eucalyptus grandis

<400> 893
 Phe Pro Gln Gly His Met Glu Gln Leu Glu Ala Ser Thr Asn Gln Glu
 1 5 10 15
 Leu Asn Gln Arg Ile Pro Leu Phe Asn Leu Thr Ser Lys Ile Leu Cys
 20 25 30
 Gln Val Val Asn Val Gln Leu Leu Ala Glu Gln Glu Thr Asp Glu Val
 35 40 45
 Tyr Ala Gln Ile Thr Leu Ile Pro Ala Gly Asn Leu Met Glu Pro Thr
 50 55 60
 Ser Pro Asp Pro Val Ser Ala Glu Thr Pro Arg Thr Arg Val His Ser
 65 70 75 80
 Phe Cys Lys Val Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly
 85 90 95

<210> 894
 <211> 79
 <212> PRT
 <213> Eucalyptus grandis

<400> 894
 Met Gly Ser Asn Ile Asn Phe Lys Asn Phe Ser Thr Asp Pro Thr Pro
 1 5 10 15
 Thr Asn Asn Arg Pro Pro Gly Asn Thr Leu Leu Thr Arg Gln Pro Ser
 20 25 30
 Val Tyr Thr Leu Thr Phe Glu Glu Phe Gln Asn Ser Ile Gly Lys Asp
 35 40 45
 Phe Gly Ser Met Asn Met Asp Glu Leu Ile Lys Asn Ile Trp Ser Ala
 50 55 60
 Glu Glu Asn Gln Ser Met Ala Ser Ala Ser Gly Ala Cys Gly Gly
 65 70 75

<210> 895
 <211> 57
 <212> PRT
 <213> Eucalyptus grandis

<400> 895
 Met Gln Ala Cys Gly Ser Tyr Glu Tyr Ser Glu Gln Tyr His Asp Glu

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      1           5           10           15
Val Lys Pro Ala Tyr Gly Pro Gln Ile Ser Ala His Ser Gln Tyr Leu
      20
Gly Tyr Asn Ser Leu Arg Leu Gly Leu Pro Leu Arg Val Ala Glu Glu
      35           40
Pro Val Tyr Val Asn Ala Lys Gln Tyr
      50           55

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<210> 896

<211> 167

<212> PRT

<213> Eucalyptus grandis

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      <400> 896
Pro Asp Val Pro Leu Pro Ser Pro Ala Gly Asp Val Thr Asp Ala Glu
      1           5           10           15
Trp Phe Tyr Val Met Ser Leu Thr Arg Ser Phe Ser Ala Gly Asp Gly
      20
Ile Pro Gly Lys Ala Leu Ser Thr Gly Ser Leu Val Trp Leu Thr Gly
      35           40
Ala Arg Glu Leu Glu Ser Tyr Lys Cys Asp Arg Ala Lys Glu Ala Glu
      50           55           60
Leu His Gly Ile Arg Thr Met Val Cys Ile Pro Thr Gly Asp Gly Val
      65           70           75           80
Leu Glu Leu Gly Ser Cys Asp Val Ile Pro Glu Asn Trp Gly Leu Val
      85           90           95
Gln Arg Ala Lys Ser Leu Phe Gly Ser Asp Leu Leu Leu Pro Lys His
      100           105           110
Pro Pro Pro Pro Pro Phe Gln Leu His His Asp His Ser Asp
      115           120           125
Ile Ser Phe Ala Asp Ile Gly Ile Ile Ala Gly Val Gln Glu Asn Asp
      130           135           140
Phe Ala Pro His Asp Asp His Glu Lys Lys Val Lys Lys Lys Gln Pro
      145           150           155           160
Leu Val Glu Gly Ala Gly Gly
      165

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<210> 897

<211> 125

<212> PRT

<213> Eucalyptus grandis

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      <400> 897
Val Ala Gly Met Thr Arg Gly Arg Arg Asp Gly Ile Leu Lys Ser Glu
      1           5           10           15
Lys Thr Arg His Val Val Lys Ile Gly Pro Met His Leu Lys Gly Val
      20
Trp Ile Pro Tyr Glu Arg Ala Leu Glu Phe Ala Asn Arg Glu Lys Ile
      35           40           45
Thr Glu Tyr Leu Tyr Pro Leu Phe Val His Asp Ile Gly Ala Leu Leu
      50           55           60
Tyr His Pro Ser Asn Pro Ser Gly Ala Thr Ser Arg Ala Gly Asn Ala
      65           70           75           80
Gln Asn Thr Leu Ala Ala Ile Asp Arg Arg Arg Asn Glu Ala Arg Met
      85           90           95
Ala Ala Ser Ile Gln Gly Gln Ala Val Ser Gly Val Leu Val Ser Pro
      100           105           110
Val Ala Gln Thr Ala Gly Gly Arg Pro Ser Val Asp Arg
      115           120           125

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<210> 898

<211> 120
 <212> PRT
 <213> Eucalyptus grandis

<400> 898
 Asn Asn Leu Ser Leu Tyr Asp Asn Gly Val Gly Ser Thr Pro Arg Pro
 1 5 10 15
 Arg Ser Asn Ala Glu Gln Leu Ile Phe Arg Ala Ala Leu Gln Asp Leu
 20 25 30
 Ser Gln Pro Lys Ser Glu Glu Thr Pro Pro Asp Gly Ala Leu Ala Val
 35 40 45
 Pro Leu Leu Arg His Gln Lys Ile Ala Leu Ser Trp Met Val Lys Lys
 50 55 60
 Glu Thr Ala Ile Asn Cys Cys Gly Gly Ile Leu Ala Asp Asp Gln Gly
 65 70 75 80
 Leu Gly Lys Thr Val Ser Thr Ile Ala Leu Ile Leu Lys Glu Arg Pro
 85 90 95
 Pro Thr Phe Lys Gln Cys Gln Glu Asn Pro Lys Gln Glu Leu Gln Thr
 100 105 110
 Phe Asp Leu Asp Glu Asp Glu Asn
 115 120

<210> 899
 <211> 58
 <212> PRT
 <213> Eucalyptus grandis

<400> 899
 Met Ser Leu Ser Ala Lys Ser Glu Ser Ile Gln Ile Arg Asp Val Trp
 1 5 10 15
 Asp Asp Asn Leu Asp Glu Glu Phe Ala Arg Ile Arg Glu Ile Val Asp
 20 25 30
 Asp Tyr Pro Tyr Val Ala Met Asp Thr Glu Phe Pro Gly Ile Val Val
 35 40 45
 Arg Pro Val Gly Asn Phe Lys Asn Ser Ser
 50 55

<210> 900
 <211> 94
 <212> PRT
 <213> Eucalyptus grandis

<400> 900
 Met Ala Asp Ser Asp Asn Asp Ser Gly Gly His Asn Asn Ala Asn Ser
 1 5 10 15
 Glu Ser Ala Ala Ala Leu Ala Arg Glu Gln Asp Arg Phe Leu Pro Ile
 20 25 30
 Ala Asn Val Ser Arg Ile Met Lys Lys Ala Leu Pro Ala Asn Ala Lys
 35 40 45
 Ile Ser Lys Glu Ala Lys Glu Thr Val Gln Glu Cys Val Ser Glu Phe
 50 55 60
 Ile Ser Phe Ile Thr Gly Glu Ala Ser Asp Gly Ser Ser Ser Ile Gly
 65 70 75 80
 Gly Gly Gly Gly Val Val Asn Ser Gly Gly Ser Ala
 85 90

<210> 901
 <211> 169
 <212> PRT
 <213> Eucalyptus grandis

<400> 901

Lys Ile Asn Pro Asp Arg Trp Glu Phe Val Asn Gln Gly Phe Gln Lys
 1 5 10 15
 Gly Asn Lys His Leu Leu Lys Asn Ile Lys Arg Arg Cys Lys Phe Ser
 20 25 30
 Glu His Arg Lys Thr Ser Ser Ser Thr Val Thr Ser Asp Tyr Gln Lys
 35 40 45
 Ala Glu Asn Glu Val Glu Leu Asn Thr Leu Lys Lys Gly Gln Glu Val
 50 55 60
 Leu Lys Thr Arg Ser Leu Lys Leu Arg Glu Glu Arg Lys Ser Phe Gln
 65 70 75 80
 His Glu Ile Glu Gln Val Ala Glu Arg Val Arg His Ala Glu Cys Arg
 85 90 95
 Asn Gln Gln Ile Phe Leu Phe Leu Thr Lys Ala Ala Lys Ser Pro Asn
 100 105 110
 Phe Val His His Leu Ile Gln Lys Lys Ser Gln Lys Arg Asp Leu Glu
 115 120 125
 Thr Cys Glu Ser Ser Lys Lys Ser Lys Leu Leu Gly Ser Asp Ala Glu
 130 135 140
 Ala Thr Lys Phe Leu Asn Glu Ala Met Asp His Met Ile Lys Ser Pro
 145 150 155 160
 Asn Val Asp Cys Leu Arg Ile Ser Asp
 165

<210> 902

<211> 266

<212> PRT

<213> Eucalyptus grandis

<400> 902

Gly Ile Leu Ala Ala Ala His Ala Ala Asn Asn Ser Pro Phe
 1 5 10 15
 Thr Ile Phe Tyr Asn Pro Arg Ala Ser Pro Ser Glu Phe Val Ile Pro
 20 25 30
 Leu Ala Lys Tyr Asn Lys Ala Phe Tyr Thr Gln Val Ser Leu Gly Met
 35 40 45
 Arg Phe Arg Met Met Phe Glu Thr Glu Glu Ser Gly Val Arg Arg Tyr
 50 55 60
 Met Gly Thr Ile Thr Gly Ile Ser Asp Leu Asp Ser Val Arg Trp Lys
 65 70 75 80
 Asn Ser Gln Trp Arg Asn Leu Gln Val Gly Trp Asp Glu Ser Thr Ala
 85 90 95
 Gly Glu Arg Pro Ser Arg Val Ser Met Trp Glu Ile Glu Pro Val Val
 100 105 110
 Thr Pro Phe Tyr Ile Cys Pro Pro Phe Phe Arg Pro Lys Phe Pro
 115 120 125
 Arg Gln Pro Asp Asp Glu Ser Asp Val Glu Asn Ala Phe Lys Arg Ala
 130 135 140
 Met Pro Trp Leu Gly Asp Glu Phe Gly Ile Lys Asp Thr Pro Asn Ser
 145 150 155 160
 Ile Phe Pro Gly Leu Ser Leu Met Gln Trp Met Ser Met Gln Gln Ser
 165 170 175
 Asn Pro Leu Gln Ala Thr Gln Ser Gly Leu Leu Pro Pro Met Leu Ser
 180 185 190
 Ser Thr Gly Leu His Asn Asn Leu Gly Ile Asp Asp Pro Ser Lys Leu
 195 200 205
 Leu Ser Phe Gln Ala Pro Thr Gln Gly Leu Gln Phe Asn Lys Thr Asn
 210 215 220
 Pro Gln Asn Gln Val Ser Gln Leu Leu Gln Pro Ser Met Ala Trp Ser
 225 230 235 240
 Gln Gln His Gln Leu Gln Gln Leu Leu Gln Asn Pro Leu Gly His Gln

245 250 255
 Gln Gln Gln Gln Gln Gln Gln Leu Gln Arg
 260 265

<210> 903
 <211> 101
 <212> PRT
 <213> Eucalyptus grandis

<400> 903
 Val Pro Ser Met Lys Pro Glu Tyr Pro Val Pro Asn Gly Ile Gly Ala
 1 5 10 15
 Ser Asp Phe Gly Glu Ser Phe Arg Phe Gln Lys Val Leu Gln Gly Gln
 20 25 30
 Glu Asn Leu Gly Phe Gly Thr Pro Tyr Asp Gly Ile Glu Thr Gln Ser
 35 40 45
 His Arg Leu Ser Glu Val Arg Arg His His Pro Asp Asp Ser Gly Gly
 50 55 60
 Ser Glu Ala Ala Ala Thr Arg Asn Gly Ile Thr Asn Pro Ser Val Asn
 65 70 75 80
 Ala Ser Val Thr Tyr Lys Gly Met Gly Phe Gly Glu Ser Phe Arg Phe
 85 90 95
 Arg Glu Val Leu Gln
 100

<210> 904
 <211> 142
 <212> PRT
 <213> Eucalyptus grandis

<400> 904
 Pro Pro Ser Pro Leu Leu Pro Pro Pro Ser Ile Pro Lys Thr Leu Leu
 1 5 10 15
 Arg Ile Asp Ser Gly Ser Pro Leu Arg Pro Pro Pro Pro Ala Ala
 20 25 30
 Met Asp Ala Ala Pro Pro Gly Gly Gly Gly Gly Gly Pro Ala
 35 40 45
 Pro Phe Leu Leu Lys Thr Tyr Glu Met Val Asp Asp Ala Gly Thr Asp
 50 55 60
 Glu Ile Val Ala Trp Ser Ser Gly Lys Thr Ser Phe Val Val Trp Asn
 65 70 75 80
 Pro Pro Glu Phe Ala Arg Leu Leu Leu Pro Thr Tyr Phe Lys His Asn
 85 90 95
 Asn Phe Ser Ser Phe Ile Arg Gln Leu Asn Thr Tyr Gly Phe Arg Lys
 100 105 110
 Ile Asp Pro Glu Arg Trp Glu Phe Ala Asn Glu Glu Phe Val Lys Asp
 115 120 125
 Lys Lys His Leu Leu Lys Asn Ile His Arg Arg Lys Pro Ile
 130 135 140

<210> 905
 <211> 80
 <212> PRT
 <213> Eucalyptus grandis

<400> 905
 Met Tyr Val Leu Glu Gly Val Thr Pro Cys Ile Gln Ser Met Gln Leu
 1 5 10 15
 Gln Ala Gly Asp Thr Val Thr Phe Ser Arg Met Asp Pro Glu Ala Lys
 20 25 30
 Leu Ile Met Gly Phe Arg Lys Ala Ser Thr Ser Met Met Gln Asp Ser

```

          35          40          45
Gln Leu Ala Ala Val Ser Asn Gly Asn His Ser Ser Glu Ala Leu Ile
 50          55          60
Ser Gly Gly Phe Glu Asn Val Pro Met Ile Ser Gly Tyr Ser Ser Leu
65          70          75          80

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<210> 906
 <211> 30
 <212> PRT
 <213> Eucalyptus grandis

```

          <400> 906
Arg Thr Gly Lys Ala Glu Ser Glu Cys Leu Cys Pro Arg Asn Ser Gly
 1          5          10          15
Leu Leu Asp Ala Leu Val His Glu Ser Lys Thr Met Ser Ser
          20          25          30

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<210> 907
 <211> 69
 <212> PRT
 <213> Eucalyptus grandis

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          <400> 907
Met Asn Gln Val Ala Asp Arg Gln Ile Pro Phe Tyr Asn Leu Pro Ser
 1          5          10          15
Lys Ile Leu Cys Arg Val Ile Asn Val Gln Leu Arg Ala Glu Pro Glu
          20          25          30
Thr Asp Glu Leu Phe Ala Gln Val Thr Leu Leu Pro Val Pro Asn Gln
          35          40          45
Asp Glu Thr Ala Val Glu Lys Glu Thr Gly Ile Pro Cys Leu Gln Arg
          50          55          60
Pro Arg Val His Ser
65

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<210> 908
 <211> 60
 <212> PRT
 <213> Eucalyptus grandis

```

          <400> 908
Thr Phe Met Gly Ile Cys Ser Leu Gln His Ser Ser Gln Gln Ala Glu
 1          5          10          15
Glu Ala Leu Ser Gln Gly Leu Glu Gln Leu Gln Ser Leu Val Asp
          20          25          30
Thr Ile Ala Gly Gly Pro Ser Ile Glu Gly Met Gln Gln Met Ala Ile
          35          40          45
Ala Leu Gly Lys Leu Thr Asn Leu Glu Gly Phe Val
          50          55          60

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<210> 909
 <211> 139
 <212> PRT
 <213> Eucalyptus grandis

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          <400> 909
Ile Gly Tyr Pro Lys Met Pro Leu Gln Ala Ser Ile Ser Thr Gln Ser
 1          5          10          15
Asp Phe Gln Ala Asp Gly Ser Gly His Gly Val Pro Ile Pro Gln Gly
          20          25          30
Ala Asp Ser Gly Ser Leu Gly Ile Ser Ala Leu Pro Thr Ile Gln Arg
          35          40          45

```

Asp Ser Gly Val His Val Lys Gln Thr Thr Ser Glu Ser Ser Arg Glu
 50 55 60
 Asp Ser Asp Asp Glu Glu Phe Glu Gly Asp Thr Gly Thr Thr Glu Asn
 65 70 75 80
 Lys Asp Pro Ala Glu Val Arg Arg Ala Arg Arg Met Gln Ser Asn Arg
 85 90 95
 Glu Ser Ala Arg Arg Ser Arg Arg Arg Lys Gln Glu His Met Ser Glu
 100 105 110
 Leu Glu Asn Gln Val Glu His Thr Gly Leu Leu Lys Arg Leu Thr Asp
 115 120 125
 Met Asn Gln Lys Tyr Asp Val Ala Ser Val Asp
 130 135

<210> 910
 <211> 153
 <212> PRT
 <213> Eucalyptus grandis

<400> 910
 Gly Thr Gly Gly Asn Trp Ile Ala Leu Pro Arg Lys Ala Gly Leu Lys
 1 5 10 15
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro
 20 25 30
 Asp Ile Lys His Gly Gly Phe Thr Glu Glu Glu Asp His Val Ile Cys
 35 40 45
 Thr Leu Phe Phe Thr Ile Gly Ser Arg Trp Ser Val Ile Ala Ser Lys
 50 55 60
 Leu Pro Gly Arg Thr Asp Asn Asp Val Lys Asn Tyr Trp Asn Thr Lys
 65 70 75 80
 Leu Lys Lys Lys Leu Met Lys Gln Leu Ala Ser Leu Lys Thr Val Pro
 85 90 95
 Glu Ser Asn Phe Asp Tyr Gln Val Cys Ala Gln Asn Ser Ala Ser Ile
 100 105 110
 Asp Pro Glu Thr Lys Asn Arg Glu Tyr Ala Ala Asn Ser Met Gly Phe
 115 120 125
 Pro Lys Gln Asn Phe Asn Pro Gly Ile Pro Thr Ser Asn Ser Ser Leu
 130 135 140
 Leu Cys Pro Pro Ser Leu Thr Glu Val
 145 150

<210> 911
 <211> 118
 <212> PRT
 <213> Eucalyptus grandis

<400> 911
 Thr Ser Cys Ala Asp Asn Cys Arg Leu Ser Leu Ser Leu Ile Gln Ala
 1 5 10 15
 Pro Val Phe Ser Ser Ile Leu Ser Lys Lys Leu Leu Cys Phe Phe Ser
 20 25 30
 Leu Ser Leu Ser Thr Met Ala Arg Pro Gln Gln Arg Tyr Arg Gly Val
 35 40 45
 Arg Gln Arg His Trp Gly Ser Trp Val Ser Glu Ile Arg His Pro Leu
 50 55 60
 Leu Lys Thr Arg Ile Trp Leu Gly Thr Phe Glu Thr Ala Glu Asp Ala
 65 70 75 80
 Ala Arg Ala Tyr Asp Glu Ala Ala Arg Leu Met Cys Gly Pro Arg Ala
 85 90 95
 Arg Thr Asn Phe Pro Tyr Asn Pro Asn Met Ser Gln Ser Leu Arg Arg
 100 105 110
 Ser Ser Ser Arg Arg His

115

<210> 912
 <211> 88
 <212> PRT
 <213> Eucalyptus grandis

<400> 912
 Met Glu Ala Ala Ala Ala Lys Val Val Gly Glu Ala Glu Glu
 1 5 10 15
 Leu Pro Lys Thr Ile Val Arg Arg Val Val Lys Glu Lys Leu Ser Arg
 20 25 30
 Cys Ser Asp Asp Gly Asp Val Ser Leu His Lys Asp Ala Leu Leu Ala
 35 40 45
 Phe Ser Glu Ser Ala Arg Ile Phe Ile His Tyr Leu Ser Ala Thr Ala
 50 55 60
 Asn Asp Ile Cys Lys Glu Ser Lys Arg Gln Thr Ile Asn Ala Asp Asp
 65 70 75 80
 Val Leu Lys Ala Leu Glu Glu Met
 85

<210> 913
 <211> 84
 <212> PRT
 <213> Eucalyptus grandis

<400> 913
 Pro Val His Glu Gln Gly Gln Leu Arg Gly Val Asp Arg Leu Glu Gly
 1 5 10 15
 Ser His Trp Val Pro Ile Gly Trp Glu Arg Ile Ser Ala Leu Ala Gln
 20 25 30
 Thr Val Gln Val Asp Ala Gly Trp Gly Met Gln Leu Asp Ser Met Asp
 35 40 45
 Asp Asp Glu Asp Leu Thr Val Ala Asp Met Glu Thr Pro Tyr Trp Glu
 50 55 60
 Arg Pro Ala Gly Pro Ile Trp Trp Cys His Phe Ser Ala Gly His Pro
 65 70 75 80
 Ala Val Glu Ala

<210> 914
 <211> 184
 <212> PRT
 <213> Eucalyptus grandis

<400> 914
 Met Lys Pro Thr Ile Asp Leu Glu Val Glu Ala Val Ser Glu Asn Asp
 1 5 10 15
 Ser Glu Ile Ser Ser Gln Val Ala Ser Asn Leu Ser Asn Gln Glu Pro
 20 25 30
 Ser Met Gly Pro Ser Asn Asp Ser Leu Ala Asn Ser Ser Tyr Leu Ile
 35 40 45
 Ser Pro Ser Ala Val Gly Ser Gly Ser Glu Thr Val Phe Leu Asp Leu
 50 55 60
 Ser Leu Gly Cys Ser Asn Asp Glu Ser Ser Gly Arg Asp Ser Val Gly
 65 70 75 80
 Val Ala Phe Ser Ser Thr Ser Glu Cys Ser Asn Glu Pro Glu Ser His
 85 90 95
 Pro Ala Ala Ala Gly Pro Thr Thr Ser Arg Val Phe Ser Cys Asn Tyr
 100 105 110
 Cys Gln Arg Lys Phe Phe Ser Ser Gln Ala Leu Gly Gly His Gln Asn

115					120					125					
Ala	His	Lys	Arg	Glu	Arg	Thr	Leu	Ala	Lys	Arg	Ala	Met	Arg	Met	Gly
130					135					140					
Met	Phe	Ser	Ser	Gln	Arg	Tyr	Ser	Ser	Leu	Ala	Ser	Leu	Pro	Leu	His
145					150					155					
Gly	Ser	Pro	Thr	Val	Arg	Asp	Leu	Gly	Ile	Lys	Ala	His	Ser	Ser	Val
165					170					175					
His	Gln	Val	His	Gln	Gly	Met	Leu								
180															

<210> 915

<211> 96

<212> PRT

<213> Eucalyptus grandis

<400> 915

Met	Trp	Asn	Pro	Ser	Ala	Ala	Gln	Glu	Asp	Asp	Ser	Trp	Glu	Val
1				5				10					15	
Arg	Ala	Phe	Ala	Glu	Asp	Thr	Ser	Asn	Ile	Met	Gly	Ala	Thr	Trp
			20					25				30		Pro
Pro	Arg	Ser	Tyr	Thr	Cys	Ser	Phe	Cys	Arg	Arg	Glu	Phe	Arg	Ser
			35				40					45		Ala
Gln	Ala	Leu	Gly	Gly	His	Met	Asn	Val	His	Arg	Arg	Asp	Arg	Lys
			50			55					60			
Leu	His	Gln	Ser	Gln	Phe	Arg	Pro	Leu	Ala	Asn	Gln	Asn	Ser	Phe
					70					75				80
Ala	Ser	Cys	Ser	Ser	Pro	Ser	Ser	Ser	Thr	Leu	Leu	Phe	Pro	Gln
				85				90					95	

<210> 916

<211> 176

<212> PRT

<213> Eucalyptus grandis

<400> 916

Met	Ala	Glu	Leu	Asp	Tyr	Cys	Gln	Thr	Lys	Ser	Ser	Pro	Gly	Ala	Ala
1				5					10				15		
Ala	Thr	Arg	Leu	Lys	Leu	Phe	Gly	Phe	Asn	Val	Ser	Asp	Glu	Glu	Asp
			20					25					30		
Ser	Ala	Val	Ser	Asp	Pro	Ile	Thr	Val	Gly	Ala	Asn	Gly	Gly	Gly	Gly
			35				40					45			
Gly	Gly	Gly	Gly	Lys	Ala	Thr	Pro	Ser	Gly	Ser	Pro	Glu	Gly	Ser	Val
			50			55					60				
Pro	Val	Gly	Gly	Gly	Gly	Glu	Arg	Lys	Tyr	Glu	Cys	Gln	Tyr	Cys	Cys
65					70					75					80
Arg	Glu	Phe	Ala	Asn	Ser	Gln	Ala	Leu	Gly	Gly	His	Gln	Asn	Ala	His
				85				90					95		
Lys	Lys	Glu	Arg	Gln	Gln	Leu	Lys	Arg	Ala	Gln	Leu	His	Ala	Ser	Arg
			100					105					110		
Asn	Ala	Ala	Val	Ser	Ser	Leu	Val	Arg	Asn	Pro	Ile	Ile	Ser	Ala	Phe
			115				120					125			
Ala	Thr	Pro	Pro	His	Leu	Leu	Ala	Thr	Val	Gly	Pro	Val	Val	Val	Thr
			130			135					140				
Gly	Ala	Ala	Pro	Thr	Ser	Pro	Ser	Trp	Val	Trp	Val	Pro	Arg	Gly	Ala
145					150					155				160	
Pro	Pro	Phe	Gln	Val	Ser	His	Cys	Gly	Val	Phe	Thr	Thr	Gly	Gln	Gly
				165					170					175	

<210> 917

<211> 138

<212> PRT

<213> Eucalyptus grandis

<400> 917

Glu His Gln Ser Asn Pro Trp His Gln Ser Ser Ala Ala Asn His
 1 5 10 15
 Arg Gln Leu Asn Leu Glu Leu Ala Leu Glu Pro Cys Ser Pro Ser Ser
 20 25 30
 Ser Ser Ser Pro Ala Ser Leu His Pro Leu Ala Val Pro Ala Lys Asp
 35 40 45
 Asn Lys Leu Tyr Ser Cys Asn Phe Cys Gln Lys Lys Phe Tyr Ser Ser
 50 55 60
 Gln Ala Leu Gly Gly His Gln Asn Ala His Lys Leu Glu Arg Thr Leu
 65 70 75 80
 Ala Lys Lys Ser Arg Asp Leu Cys Ser Ala Ala Lys Pro Pro Ala Ala
 85 90 95
 Thr Ser Asn Gly His His Val Arg Pro Ser Phe Gln Ser Val Val Tyr
 100 105 110
 Glu Asn Gln Pro Arg Leu Ala Arg His Val Gly Asp Asp Met Arg Tyr
 115 120 125
 Ala Gly Thr Asn Pro Leu Tyr Gly Ser Ser
 130 135

<210> 918

<211> 68

<212> PRT

<213> Eucalyptus grandis

<400> 918

Gln Leu Ser Ser Val Asp Arg Glu Ala Arg Val Leu Arg Tyr Arg Glu
 1 5 10 15
 Lys Arg Lys Asn Arg Lys Phe Glu Lys Thr Ile Arg Tyr Ala Ser Arg
 20 25 30
 Lys Ala Tyr Ala Glu Thr Arg Pro Arg Ile Lys Gly Arg Phe Ala Lys
 35 40 45
 Arg Ala Asp Ile Glu Ala Glu Ala Glu Arg Met Phe Gly Phe Gly Val
 50 55 60
 Val Pro Ser Phe
 65

<210> 919

<211> 224

<212> PRT

<213> Eucalyptus grandis

<400> 919

Arg Gly Pro Trp Thr Val Glu Glu Asp Leu Thr Leu Val Asn Tyr Ile
 1 5 10 15
 Ala Asn His Gly Glu Gly Arg Trp Asn Ser Leu Ala Arg Ser Ala Gly
 20 25 30
 Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
 35 40 45
 Arg Pro Asp Val Arg Arg Gly Asn Ile Thr Leu Glu Glu Gln Leu Leu
 50 55 60
 Ile Leu Glu Leu His Ser Arg Trp Gly Asn Arg Trp Ser Lys Ile Ala
 65 70 75 80
 Gln His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg
 85 90 95
 Thr Arg Val Gln Lys His Ala Lys Gln Leu Lys Cys Asp Val Asn Ser
 100 105 110
 Lys Gln Phe Lys Asp Ala Met Lys Tyr Leu Trp Met Pro Arg Leu Val
 115 120 125

Glu Arg Ile Gln Ala Ala Ser Ala Ser Val Ser Thr Ala Thr Val Ala
 130 135 140
 Ala Ala Ala Met Ala Ala Pro Thr Met Ala Thr Thr Ala Ala Ser
 145 150 155 160
 Asn Ile Gly Gly Met Ala Phe Pro Pro Ala Leu Ala Gly Met Gly Gly
 165 170 175
 Asp Phe Arg Gly Gly Arg Val Asn Val Ala Pro Ser Tyr Ser Thr Pro
 180 185 190
 Glu Asn Ser Cys Thr Thr Ala Ser Ser Asp Ser Phe Gly Ala Gln Val
 195 200 205
 Ser Pro Val Ser Asp Leu Thr Asp Leu Asp Arg Val Leu Thr Leu Ser
 210 215 220

<210> 920

<211> 286

<212> PRT

<213> Eucalyptus grandis

<400> 920

Met Ser Leu Trp Ala Asp Tyr Asp His Ala Ala Thr Asp Leu Ser
 1 5 10 15
 Ala Phe Trp Pro Pro Pro Ala Thr Pro Pro Pro Ala Pro Ala Pro
 20 25 30
 Pro Leu Ser Gln Glu Ser Leu Gln Arg Arg Leu Gln Ala Leu Ile Glu
 35 40 45
 Gly Ala Arg Gly Arg Asp Gly Glu Glu Gly Ala Gly Gly Pro Ala Ala
 50 55 60
 Ala Trp Thr Tyr Thr Ile Phe Trp Gln Ser Ser Gly Asp Tyr Ser Gly
 65 70 75 80
 Pro Val Leu Gly Trp Gly Asp Gly Tyr Tyr Lys Gly Asp Gly Arg Ala
 85 90 95
 Arg Ser Arg Gly Ser Ala Cys Ser Gln Ala Glu Gln Glu His Arg Lys
 100 105 110
 Lys Val Leu Arg Glu Leu Asn Ser Leu Ile Ser Gly Ala Pro Pro Ala
 115 120 125
 Asp Asp Ala Val Glu Glu Glu Val Thr Asp Thr Glu Trp Phe Phe Leu
 130 135 140
 Val Ser Met Thr Gln Ser Phe Ala Gly Gly Val Gly Leu Pro Gly Arg
 145 150 155 160
 Ala Tyr Phe Ser Ser Asn Pro Ala Trp Val Thr Gly Ala Glu Arg Leu
 165 170 175
 Gly Asn Cys Gly Cys Asp Arg Ala Arg Gln Ala Gln Ile Phe Gly Leu
 180 185 190
 Gln Thr Ile Ala Cys Val Pro Val Leu Asn Gly Val Val Glu Leu Gly
 195 200 205
 Ser Thr Glu Pro Ile Tyr Gln Ser Ser Asp Leu Ile Ser Gly Ile Arg
 210 215 220
 Gly Leu Phe Asn Phe His Glu Ser Glu Met Gly Cys Gly Gly Arg Val
 225 230 235 240
 Leu Asn Ser Glu His Asp Pro Ala Ser Leu Trp Ile Cys Asp Pro Pro
 245 250 255
 Val Thr Met Glu Ile Asn Asp Arg Pro Met Thr Phe Gln Ile Glu Asn
 260 265 270
 Pro Ser Ser Ser Ser Leu Thr Glu Ser Pro Ser Ala Ile Cys
 275 280 285

<210> 921

<211> 101

<212> PRT

<213> Eucalyptus grandis

<400> 921
 Met Val Pro Pro Phe Pro Thr Ala Glu Leu Pro Leu Asn Glu Asn Asp
 1 5 10 15
 Ser Gln Asp Met Val Ile Tyr His Val Leu Asn Glu Ala Met Ser Gln
 20 25 30
 Asn Asn Ser Ser Leu Pro His Pro Asn Gln Ser Gly Ser Pro Ser Ser
 35 40 45
 Gly Gly Ser Leu Glu Pro Ser Arg Gly Ile Thr Lys Lys His Tyr Arg
 50 55 60
 Gly Val Arg Arg Arg Pro Trp Gly Lys Phe Ala Val Arg Phe Ala Thr
 65 70 75 80
 Arg Tyr Ala Thr Gly Pro Glu Phe Gly Ser Gly His Ser Arg Gln Pro
 85 90 95
 Arg Arg Arg Arg Trp
 100

<210> 922
 <211> 139
 <212> PRT
 <213> Eucalyptus grandis

<400> 922
 Ile Gly Tyr Pro Lys Met Pro Leu Gln Ala Ser Ile Ser Thr Gln Ser
 1 5 10 15
 Asp Phe Gln Ala Asp Gly Ser Gly His Gly Val Pro Ile Pro Gln Gly
 20 25 30
 Ala Asp Ser Gly Ser Leu Gly Ile Ser Ala Leu Pro Thr Ile Gln Arg
 35 40 45
 Asp Ser Gly Val His Val Lys Gln Thr Thr Ser Glu Ser Ser Arg Glu
 50 55 60
 Asp Ser Asp Asp Glu Glu Phe Glu Gly Asp Thr Gly Thr Thr Glu Asn
 65 70 75 80
 Lys Asp Pro Ala Glu Val Arg Arg Ala Arg Arg Met Gln Ser Asn Arg
 85 90 95
 Glu Ser Ala Arg Arg Ser Arg Arg Arg Lys Gln Glu His Met Ser Glu
 100 105 110
 Leu Glu Asn Gln Val Glu His Thr Gly Leu Leu Lys Arg Leu Thr Asp
 115 120 125
 Met Asn Gln Lys Tyr Asp Val Ala Ser Val Asp
 130 135

<210> 923
 <211> 222
 <212> PRT
 <213> Pinus radiata

<400> 923
 Met Gly Gln Gln Ser Leu Ile Tyr Ser Phe Val Ala Arg Gly Thr Val
 1 5 10 15
 Val Leu Ala Glu Tyr Thr Glu Phe Lys Gly Asn Phe Thr Gly Ile Ala
 20 25 30
 Ala Gln Cys Leu Gln Lys Leu Pro Ala Ser Asn Asn Lys Phe Thr Tyr
 35 40 45
 Asn Cys Asp Asn His Thr Phe Asn Tyr Leu Val Glu Asp Gly Phe Ala
 50 55 60
 Tyr Cys Val Val Ala Asp Glu Ser Val Gly Arg Gln Val Pro Met Ala
 65 70 75 80
 Phe Leu Glu Arg Val Lys Glu Asp Phe Lys Arg Arg Tyr Gly Gly Gly
 85 90 95
 Arg Ala Asp Thr Ala Val Ala Asn Ser Leu Asn Arg Asp Phe Gly Ser
 100 105 110

Lys Leu Lys Glu His Met Gln Tyr Cys Ile Asp His Pro Glu Glu Ile
 115 120 125
 Ser Lys Leu Ala Lys Val Lys Ala Gln Val Ser Glu Val Lys Gly Val
 130 135 140
 Met Met Asp Asn Ile Glu Lys Val Leu Asp Arg Gly Glu Lys Ile Glu
 145 150 155 160
 Leu Leu Val Asp Lys Thr Glu Asn Leu Arg Phe Gln Ala Gln Asp Phe
 165 170 175
 Gln Lys Lys Gly Thr Glu Leu Arg Arg Lys Met Trp Phe Gln Asn Met
 180 185 190
 Lys Val Lys Leu Ile Val Leu Gly Ile Val Val Ala Leu Ile Leu Ile
 195 200 205
 Ile Val Leu Ser Val Cys His Gly Phe Asn Cys Ser Lys Lys
 210 215 220

<210> 924
 <211> 105
 <212> PRT
 <213> Pinus radiata

<400> 924
 Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Thr Ala Asn
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Lys Gly Gly Leu Leu Lys Lys Ala
 20 25 30
 His Glu Leu Ser Val Leu Cys Asn Ala Glu Ile Ala Leu Ile Val Phe
 35 40 45
 Ser Asn Thr Gly Lys Leu His Asp Trp Ser Ser Ser Ser Met Lys Lys
 50 55 60
 Val Met Glu Lys Tyr Gln Lys Ser Asp Gln Gly Leu Gly Leu Met Asp
 65 70 75 80
 Tyr Gln Gln Gln Gln Leu Leu Cys Glu Met Lys Arg Ile Thr Lys Glu
 85 90 95
 Asn Glu Ser Leu Arg Ala Arg Leu Arg
 100 105

<210> 925
 <211> 102
 <212> PRT
 <213> Pinus radiata

<400> 925
 Val Pro Ser Pro Leu Val Pro Thr Arg Glu Asn Tyr Phe Val Arg Tyr
 1 5 10 15
 Cys Lys Gln His Ser Asp Gly Ile Trp Ala Val Val Asp Val Ser Leu
 20 25 30
 Asp Thr Leu Arg Gly Asn Pro Gln Pro His Pro Asn Cys Pro Pro Ser
 35 40 45
 Thr Leu Arg Cys Arg Arg Arg Pro Ser Gly Cys Leu Ile Gln Glu Met
 50 55 60
 Pro Asn Gly Tyr Ser Lys Val Thr Trp Val Glu His Val Glu Val Asp
 65 70 75 80
 Glu Arg Ala Val His Arg Ile Tyr Asp Lys Leu Val Ser Thr Val Ser
 85 90 95
 Arg Arg Thr Pro Tyr Arg
 100

<210> 926
 <211> 176
 <212> PRT
 <213> Pinus radiata

<400> 926
 Leu Ser Asn Ile Glu Pro Lys Gln Ile Lys Val Trp Phe Gln Asn Arg
 1 5 10 15
 Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser Arg Leu Gln Thr Val
 20 25 30
 Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu Met Glu Glu Asn Asp
 35 40 45
 Arg Leu Gln Lys Gln Val Ser Gln Leu Val Tyr Glu Asn Gly Tyr Met
 50 55 60
 Arg Gln Gln Leu Gln Asn Ala Ser Val Ala Ala Thr Asp Thr Ser Cys
 65 70 75 80
 Glu Ser Val Val Thr Ser Gly Gln His Gln His Asn Pro Thr Pro Gln
 85 90 95
 His Pro Pro Arg Asp Ala Ser Pro Ala Gly Leu Leu Ser Ile Ala Glu
 100 105 110
 Glu Thr Leu Thr Glu Phe Leu Ser Lys Ala Lys Gly Ala Ala Val Asp
 115 120 125
 Trp Val Gln Met Pro Gly Met Lys Pro Gly Pro Asp Ser Ile Gly Ile
 130 135 140
 Val Ala Ile Ser Asn Thr Cys Asn Gly Val Ala Ala Arg Ala Cys Gly
 145 150 155 160
 Leu Val Gly Leu Asp Pro Thr Lys Val Ala Glu Ile Leu Lys Asp Arg
 165 170 175

<210> 927
 <211> 68
 <212> PRT
 <213> Pinus radiata

<400> 927
 Ile Leu Pro Glu Gly Pro Pro Glu Ser Arg Ser Val Ile Asp Asn Arg
 1 5 10 15
 Gln Val Glu Gly Ser Ile Leu Thr Ile Ala Phe Gln Ile Leu Val Asn
 20 25 30
 Asp Leu Pro Ser Ala Lys Leu Thr Leu Glu Ser Val Glu Thr Val Asn
 35 40 45
 Asn Leu Ile Ser Cys Thr Ala Gln Arg Ile Lys Ala Ala Leu His Lys
 50 55 60
 Val Glu Asp Val
 65

<210> 928
 <211> 68
 <212> PRT
 <213> Pinus radiata

<400> 928
 Met Gly Arg Ala Leu Gly Arg Thr Glu Ile Lys Arg Ile Glu Asn Glu
 1 5 10 15
 Val Ser Arg Asn Val Ser Phe Arg Lys Arg Arg Arg Gly Leu Leu Lys
 20 25 30
 Lys Ala Ala Glu Leu Ser Ile Leu Cys Asp Ala Thr Val Gly Val Val
 35 40 45
 Val Phe Ser Pro Ala Gly Lys Leu Ser Glu Tyr Ala Ser Thr Ser Glu
 50 55 60
 Ser Asn Gly Tyr
 65

<210> 929
 <211> 126

<212> PRT

<213> Pinus radiata

<400> 929

```

Ile Arg Asn Pro Thr Asn Arg His Ser Ser Phe Tyr Lys Arg Lys Gly
1          5          10          15
Gly Leu Leu Lys Lys Ala Phe Glu Leu Ala Val Leu Cys Asp Ala Glu
20          25          30
Val Ala Leu Ile Ile Phe Ser Glu Thr Gly Arg Ile Tyr Glu Phe Ala
35          40          45
Ser His Asp Asp Val Thr Thr Val Leu Ala Lys Tyr Arg Ile Gln Thr
50          55          60
Lys Thr Ala Gly Asn Ala Met Pro Ser Ser Leu Gln Lys Thr Glu Phe
65          70          75          80
Asp Gln Leu Gln Val Arg Met Leu Gln Glu Lys Ile Asp Asn Leu Glu
85          90          95
Lys Thr Lys Lys His Met Val Gly Glu Asn Leu Glu Ser Leu Thr Trp
100          105          110
Lys Glu Leu Gln Gln Val Glu Lys Lys Leu Ser Lys Ala Thr
115          120          125

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<210> 930

<211> 90

<212> PRT

<213> Pinus radiata

<400> 930

```

Leu Phe His Pro Ala Arg Ile Gly Gly Phe Gly Gly Gly Gln Val Ile
1          5          10          15
Leu Pro Leu Ala His Thr Val Glu His Glu Glu Phe Leu Glu Val Ile
20          25          30
Lys Leu Glu Asn His Gly Leu Thr Gln Glu Glu Ala Leu Leu Ser Arg
35          40          45
Asp Met Phe Leu Leu Gln Leu Cys Ser Gly Leu Asp Glu Asn Ala Val
50          55          60
Gly Ala Cys Ala Glu Leu Val Phe Ala Pro Ile Asp Ala Ser Leu Ala
65          70          75          80
Asp Ser Ser Pro Leu Leu Pro Ser Gly Phe
85          90

```

<210> 931

<211> 138

<212> PRT

<213> Pinus radiata

<400> 931

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Met Gly Arg Gly Arg Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Asn
1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Lys Lys Ala
20          25          30
Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Phe
35          40          45
Ser Thr Arg Gly Lys Leu Tyr Glu Phe Ala Ser Ser Ser Met Asn Lys
50          55          60
Thr Leu Glu Arg Tyr Glu Lys Cys Ser Tyr Ala Met Gln Asp Thr Thr
65          70          75          80
Gly Val Ser Asp Arg Glu Ala Gln Asn Trp His Gln Glu Val Thr Lys
85          90          95
Leu Lys Gly Lys Val Glu Leu Leu Gln Arg Ser Gln Arg His Leu Leu
100          105          110
Gly Glu Asp Leu Gly Pro Leu Asn Val Lys Glu Leu Gln Leu Glu

```

115 120 125
 Arg Gln Leu Glu Val Ala Leu Thr His Leu
 130 135

<210> 932
 <211> 161
 <212> PRT
 <213> Pinus radiata

<400> 932
 Met Gly Gln Gln Ser Leu Ile Tyr Ser Phe Val Ala Arg Gly Thr Val
 1 5 10 15
 Val Leu Ala Glu Tyr Thr Gln Phe Thr Gly Asn Phe Thr Ile Ala
 20 25 30
 Asn Gln Cys Leu Gln Lys Ile Pro Ala Ser Asn Asn Lys Phe Thr Tyr
 35 40 45
 Asn Cys Asp Arg His Thr Phe Asn Tyr Leu Val Glu Asp Gly Tyr Thr
 50 55 60
 Tyr Cys Val Val Ala Asp Glu Ser Val Gly Arg Gln Leu Pro Ile Ala
 65 70 75 80
 Phe Leu Glu Arg Ile Lys Asp Asp Phe Lys Lys Arg Tyr Gly Gly Gly
 85 90 95
 Lys Ala Asp Thr Ala Val Ala His Ser Leu Asn Lys Asp Phe Gly Pro
 100 105 110
 Lys Leu Lys Asp His Met Gln Tyr Cys Val Asp His Pro Glu Glu Ile
 115 120 125
 Asn Lys Leu Ala Lys Val Lys Ala Gln Val Ser Glu Val Lys Gly Val
 130 135 140
 Met Met Glu Asn Ile Glu Lys Val Leu Asp Arg Gly Glu Lys Ile Glu
 145 150 155 160
 Leu

<210> 933
 <211> 54
 <212> PRT
 <213> Pinus radiata

<400> 933
 Phe Pro Thr Gly Asn Gly Gly Thr Ile Glu Leu Leu Tyr Met His Thr
 1 5 10 15
 Tyr Ala Ala Thr Thr Leu Ala Ser Ala Arg Asp Phe Trp Thr Leu Arg
 20 25 30
 Tyr Thr Thr Val Leu Glu Tyr Gly Ser Leu Val Val Cys Glu Arg Ser
 35 40 45
 Leu Ser Gly Thr Gln Gly
 50

<210> 934
 <211> 123
 <212> PRT
 <213> Pinus radiata

<400> 934
 Arg Arg Glu Ala Cys Cys Pro Gln Pro Ser Leu Met Ala Arg Ala Pro
 1 5 10 15
 His His His Gln Gln Gln Gln His His Gln His His Gln Gln Glu Ala
 20 25 30
 Ser Arg Met Val Thr Ser Leu Glu Val Asp Ile Asp Thr Ala Cys Ser
 35 40 45
 Ser Lys Pro Asn Asp Ser Ile Asp Ala Leu Lys Ser Lys Ile Ala Cys

50 55 60
 His Pro His Tyr Pro Gln Leu Leu Ala Ala Tyr Met Asp Cys Gln Lys
 65 70 75 80
 Val Gly Ala Pro Pro Glu Val Val Thr Val Leu Asp Glu Ile Ile Gln
 85 90 95
 Glu Asn Gln Leu Gly Arg His Ser Gly Thr Met Asp Ile Gly Val Asp
 100 105 110
 Pro Glu Leu Asp Gln Phe Met Glu Ala Tyr Cys
 115 120

<210> 935
 <211> 113
 <212> PRT
 <213> Pinus radiata

<400> 935
 Met Gly Arg Gly Lys Ile Glu Ile Lys Lys Ile Asp Asp Val Thr Ser
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Lys Met Gly Ile Phe Lys Lys Ala
 20 25 30
 His Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Val Leu Ile Phe
 35 40 45
 Ser Asn Thr Gly Arg Leu Tyr Asp Tyr Ala Ser Ser Arg Cys Met Glu
 50 55 60
 Arg Thr Ile Glu Arg Tyr Glu Lys Cys Thr Lys Ala Ile Asn Cys Pro
 65 70 75 80
 Thr Ser Asp Pro Ile Val Glu Asn Lys Ser Pro Ile Gln Glu Gly Ile
 85 90 95
 Glu Ile Leu Arg Gln Lys Leu Arg Ala Leu Gln Arg Leu Gln Arg Asn
 100 105 110
 Leu

<210> 936
 <211> 162
 <212> PRT
 <213> Pinus radiata

<400> 936
 Val Gln Glu Val Ala His Ile Ala Asn Gly Ser His Pro Gly Asn Cys
 1 5 10 15
 Ile Ser Leu Leu Arg Val Asn Ala Cys Ser Thr Ser Gln Asn Val Glu
 20 25 30
 Leu Ile Leu Gln Glu Ser Cys Thr Asp Ala Ser Gly Ser Val Ile Val
 35 40 45
 Tyr Ala Pro Val Asp Val Pro Ala Ile Asn Ile Ala Met Ser Gly Glu
 50 55 60
 Asp Pro Ser Tyr Ile Ala Leu Leu Pro Ser Gly Phe Ala Ile Leu Pro
 65 70 75 80
 Asp Gly Gln Asn Arg Ser Ser Thr Ser Ser Leu Leu Glu Gly Ala Asn
 85 90 95
 Ser Ser Ser Asn Ser Ser Asn Ser Ser Gly Leu Asp Ser Pro Leu Thr
 100 105 110
 Arg Gly Gly Ser Leu Leu Thr Val Ala Phe Gln Val Leu Val Ser His
 115 120 125
 Leu Pro Thr Ala Lys Leu Gly Leu Asp Ser Val Thr Thr Ile Asn Asn
 130 135 140
 Leu Ile Cys Asn Thr Val Gln Gln Ile Lys Ser Ala Leu His Cys Ala
 145 150 155 160
 Asp Val

<210> 937
 <211> 114
 <212> PRT
 <213> Pinus radiata

<400> 937
 Asn Arg Arg Ala Arg Thr Lys Trp Lys Arg Asn Glu Val Glu Cys Asp
 1 5 10 15
 Asn Leu Lys Arg Cys Cys Glu Ser Leu Arg Glu Glu Asn Arg Arg Leu
 20 25 30
 Glu Lys Glu Val Gln Ser Leu Arg Ala Met Lys Val Pro Gln Ser Pro
 35 40 45
 Asn Ser Met Pro Leu Ala Ala Ala Thr Leu Ala Met Cys Pro Ala Cys
 50 55 60
 Glu Gly Leu Ala Ile Lys Asn Arg Gly Ala Ala Thr Ser Ser Thr Ala
 65 70 75 80
 Lys Ser Gln Gln Ser Leu Leu Thr Ile Met Gly Ile Gly Asp Val Asn
 85 90 95
 Met Ile Ser Lys Asn Asn Gln Thr Pro Ser Met Gly Met Gly Asp Glu
 100 105 110
 Met Asn

<210> 938
 <211> 120
 <212> PRT
 <213> Pinus radiata

<400> 938
 Met Leu Lys Thr Leu Glu Arg Tyr Gln Lys Cys Ser Tyr Val Leu Gln
 1 5 10 15
 Asp Ala Thr Val Ser Asp Arg Glu Ala Gln Asn Trp His Gln Glu Val
 20 25 30
 Gly Lys Leu Lys Ala Lys Val Glu Leu Leu Gln Arg Ser Gln Arg His
 35 40 45
 Leu Leu Gly Glu Asp Leu Gly Pro Leu Ser Ile Lys Glu Leu Gln Gln
 50 55 60
 Leu Glu Arg Gln Leu Glu Val Ala Leu Thr His Val Arg Ser Arg Lys
 65 70 75 80
 Thr Gln Val Met Leu Glu Met Met Asp Glu Leu Arg Arg Lys Glu Arg
 85 90 95
 Ile Leu Gln Glu Val Asn Lys Ser Leu Arg Lys Lys Leu Gln Glu Ala
 100 105 110
 Glu Gly Gln Ala Phe Asn Ala Met
 115 120

<210> 939
 <211> 110
 <212> PRT
 <213> Pinus radiata

<400> 939
 Ser Asp Thr Ala Asn Ser Ser Glu Leu Leu Gly Ser Ser Arg Ser Asp
 1 5 10 15
 Gly Asp His Pro His His Gly His His Asp Gln Gln Gln Gln Gln
 20 25 30
 Glu Asn His Met Val Trp Gln Asn Ser Arg Leu Lys Ala Asp Val Leu
 35 40 45
 Gln His Pro Leu Tyr Asp Gln Leu Leu Ala Ala His Val Ala Cys Leu
 50 55 60

```

Arg Ile Ala Thr Pro Val Asp Gln Leu Pro Lys Ile Asp Ala Gln Leu
65          70          75          80
Ala Gln Gln His His Val Val Ala Lys Tyr Ser Val Leu Gly Arg Asn
85          90          95
Gln Leu Leu Thr Gly Glu Glu Lys Glu Glu Leu Asp Arg Phe
100        105        110

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<210> 940

<211> 86

<212> PRT

<213> Pinus radiata

<400> 940

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Arg Asn Tyr Leu Gly Glu Tyr Thr Gly Glu Leu Ile Ser His Arg Glu
1          5          10          15
Ala Asp Lys Arg Gly Lys Ile Tyr Asp Arg Glu Asp Ser Ser Phe Leu
20        25        30
Phe Asn Leu Asn Asp Gln Tyr Val Leu Asp Ala Tyr Arg Lys Gly Asp
35        40        45
Lys Leu Lys Phe Ala Asn His Ser Pro Thr Pro Asn Cys Tyr Ala Lys
50        55        60
Val Ile Met Val Ala Gly Asp His Arg Val Gly Ile Phe Ala Lys Glu
65        70        75        80
Arg Ile Ala Ala Gly Glu
85

```

<210> 941

<211> 128

<212> PRT

<213> Pinus radiata

<400> 941

```

Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Ala Thr Asn
1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Gly Gly Leu Lys Lys Lys Ala
20        25        30
Gln Glu Leu Ser Val Leu Cys Asn Ala Glu Val Ala Leu Ile Ile Phe
35        40        45
Ser Ser Thr Gly Lys Leu His Glu Trp Ser Ser Ser Ser Ser Phe Phe
50        55        60
Met Leu Gln Lys Ser Met Lys Lys Ile Leu Glu Arg Tyr Gln Lys Ser
65        70        75        80
Glu Gln Gly Leu Gly Leu Met Asp Tyr Gln His Gln Gln Leu Leu Cys
85        90        95
Glu Met Arg Arg Ile Thr Lys Glu Asn Glu Ser Leu Gln Glu Arg Leu
100       105       110
Arg His Met Asn Gly Glu Glu Val Asn Ser Leu Lys Leu Pro Glu Leu
115       120       125

```

<210> 942

<211> 86

<212> PRT

<213> Pinus radiata

<400> 942

```

Ala Ile Cys Ser Ile Ser Phe His Pro Tyr Pro Lys Asp Ala Asp Lys
1          5          10          15
His Leu Leu Ala Arg Gln Thr Gly Leu Thr Arg Ser Gln Val Ser Asn
20        25        30
Trp Phe Ile Asn Ala Arg Val Arg Leu Trp Lys Pro Met Val Glu Glu
35        40        45

```

Met Tyr Met Glu Glu Leu Arg Glu Ala Glu Thr Gln Asn His Ala Ala
 50 55 60
 Asp Ser Lys Val Thr Thr Glu Ser Gly Gln Asn Asn Glu Glu Thr Val
 65 70 75 80
 Ser Lys Glu Gly Ala Gly
 85

<210> 943
 <211> 58
 <212> PRT
 <213> Pinus radiata

<400> 943
 Gly Ala Gly Tyr Ser Ser Val Ser Gly Ile Asp Glu His Ala Ala Gly
 1 5 10 15
 Phe Cys Ser Gln Leu Val Phe Ala Pro Ile Asp Ala Ser Phe Ala Asp
 20 25 30
 Asp Ala Pro Leu Ala Ala Leu Trp Phe Pro Ser Asn Ser Ser Arg Ile
 35 40 45
 Trp Ile Arg Met Phe Leu Leu Gln Asn Gly
 50 55

<210> 944
 <211> 112
 <212> PRT
 <213> Pinus radiata

<400> 944
 Asp Gly Gly Gly Arg Gly Ala Gly His Phe Val Met Glu Gln Phe Ile
 1 5 10 15
 Pro Glu Gln Ala Val Ile Ser Asp Ser Ser Ile Ser Ser Val Lys Thr
 20 25 30
 Glu Val Cys Ser Gly Ser Gly Gly Gln Phe Glu Leu Ile Arg Arg Lys
 35 40 45
 Glu Glu Gly Arg Cys Gly Arg Ala Tyr Ala Glu Pro Ser Phe Val Val
 50 55 60
 Thr Pro Leu Val Thr Ser Leu Pro Pro Gln Gln Gln Glu Gly Arg Met
 65 70 75 80
 Val Thr Ser Leu Ala Val Asp Met Asp Ser Ser Cys Ser Cys Lys Pro
 85 90 95
 Asn Glu Ala Asp Ala Met Arg Ala Lys Leu Phe Ala His Val His Tyr
 100 105 110

<210> 945
 <211> 134
 <212> PRT
 <213> Pinus radiata

<400> 945
 Ala Arg Gly Lys Thr Gln Met Arg Lys Ile Glu Ser Ala Thr Ser Arg
 1 5 10 15
 Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Met Lys Lys Ala Tyr
 20 25 30
 Glu Leu Ser Val Leu Cys Asp Ala Gln Leu Gly Leu Ile Val Phe Ser
 35 40 45
 Pro Arg Gly Lys Val Tyr Glu Phe Ser Ser Thr Cys Met Gln Lys Met
 50 55 60
 Leu Ala Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asp Thr Ser Thr Ser
 65 70 75 80
 Lys Glu Gln Asp Val Gln Cys Leu Lys Arg Glu Ser Ala Asn Met Glu
 85 90 95

Glu Arg Ile Glu Ile Leu Glu Ser Met Gln Arg Lys Met Leu Gly Glu
 100 105 110
 Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln
 115 120 125
 Val Glu Arg Gly Leu Arg
 130

<210> 946
 <211> 110
 <212> PRT
 <213> Pinus radiata

<400> 946
 Ser Leu Val Trp Gly Ala Leu Lys Met Gly Lys Thr Lys Met Glu Ile
 1 5 10 15
 Lys Arg Ile Gln Asn Pro Ser Arg Arg Gln Val Thr Phe Ser Lys Arg
 20 25 30
 Lys Asn Gly Leu Leu Lys Lys Ala Phe Glu Leu Ser Val Leu Cys Asp
 35 40 45
 Ala Glu Val Ala Leu Ile Ile Phe Ser Glu Thr Gly Lys Ile Cys Glu
 50 55 60
 Phe Ala Ser His Asp Asp Met Ala Thr Ile Leu Glu Lys Tyr Arg Ile
 65 70 75 80
 Tyr Thr Glu Thr His Gly Asn Met Glu Ser Ser Ser Val Gln Ser Val
 85 90 95
 Lys Ile Gly Glu Ser Gln Leu Lys Ala Leu Arg Glu Lys Met
 100 105 110

<210> 947
 <211> 92
 <212> PRT
 <213> Pinus radiata

<400> 947
 Lys Leu Pro Lys Glu Ala Arg Gln Lys Leu Leu Asp Trp Trp Thr Arg
 1 5 10 15
 Asn Tyr Lys Trp Pro Tyr Pro Ser Glu Ser Gln Lys Ile Ala Leu Ala
 20 25 30
 Glu Ser Thr Gly Leu Asp Gln Lys Gln Ile Asn Asn Trp Phe Ile Asn
 35 40 45
 Gln Arg Lys Arg His Trp Lys Pro Ser Glu Glu Met Gln Phe Val Val
 50 55 60
 Met Asp Ser Pro Asn Pro His Asn Ala Ala Phe Phe Leu Glu Gly His
 65 70 75 80
 Leu Arg Thr Asp Gly Thr Ala Phe Ser Met Asp Cys
 85 90

<210> 948
 <211> 155
 <212> PRT
 <213> Pinus radiata

<400> 948
 Phe Ser Cys Val Ser Lys Ala Ala Met Ile Leu Ala Glu His Ser Glu
 1 5 10 15
 Gly Asp Ala Glu Leu Glu Glu Val Ala Gly Glu Cys Leu Glu Arg Val
 20 25 30
 Pro Pro Leu His Ser Arg Phe Thr His Thr Thr Lys Arg Lys Met Tyr
 35 40 45
 Ser Phe Leu Met Asp Gly Pro Phe Val Tyr Cys Ala Ile Val Asp Glu
 50 55 60

Ala Leu Gly Lys Pro Gln Val Phe Val Phe Leu Glu His Val Arg Asp
 65 70 75 80
 Glu Phe Lys Lys Leu Leu Lys Asn Arg Gly Cys Glu Gly Leu Ser Ser
 85 90 95
 Cys Cys Phe Asp Lys Glu Phe Gly Pro Val Tyr Lys Arg Leu Val Ala
 100 105 110
 Pro Leu Val Gly Val Pro Gln Ile Glu Lys Asp Arg Leu Met Glu Glu
 115 120 125
 Glu Ser Lys Ser Gln Pro Ala Lys Thr His Pro Val Gln Val Asn Asn
 130 135 140
 Ser Pro Lys Asp Ser Leu Pro Val Tyr Asp Asn
 145 150 155

<210> 949
 <211> 165
 <212> PRT
 <213> Pinus radiata

<400> 949
 Asp Gly Ser Leu Val Ile Cys Glu Arg Ser Leu Ser Ala Ala Gln Gly
 1 5 10 15
 Met Pro Met Val Ser Gln Ser Gln Ser Phe Val His Gly Glu Leu Leu
 20 25 30
 Ser Ser Gly Tyr Leu Ile Arg Pro Cys Glu Gly Arg Gly Ala Leu Val
 35 40 45
 Ile Met Val Asp His Arg Asn Leu Glu Ala Ser Ser Val Pro Glu Ala
 50 55 60
 Leu Arg Pro Leu Tyr Glu Ser Ser Thr Phe Phe Ala Gln Lys Met Thr
 65 70 75 80
 Val Glu Ala Ser Tyr His Leu Gln Gly Lys Val Gln Pro Glu Met Ile
 85 90 95
 Ser Leu Ser Lys Lys Leu Gln Gln Pro Cys Asn Val Arg Ser Tyr Ser
 100 105 110
 Gln Arg Leu Cys Arg Gly Phe Asn Glu Ala Val Asn Thr Leu Pro Asp
 115 120 125
 Asp Gly Trp Met Ser Leu Ser Lys Asp Gly Leu Gly Asp Val Thr Ile
 130 135 140
 Cys Glu Ser Phe Val Lys Leu Pro Glu Pro Asn Ala Ser Gln Ile Ala
 145 150 155 160
 Tyr Val Asn Ser Met
 165

<210> 950
 <211> 153
 <212> PRT
 <213> Pinus radiata

<400> 950
 Arg Ala Leu Gln Gln Leu Gly Met Ile Gln Gln His Ala Trp Arg Pro
 1 5 10 15
 Gln Arg Gly Leu Pro Glu Arg Ser Val Ser Val Leu Arg Ala Trp Leu
 20 25 30
 Phe Glu His Phe Leu His Pro Tyr Pro Lys Asp Ala Asp Lys His Met
 35 40 45
 Leu Ala Arg Gln Thr Gly Leu Thr Arg Asn Gln Val Ser Asn Trp Phe
 50 55 60
 Ile Asn Ala Arg Val Arg Leu Trp Lys Pro Met Val Glu Glu Met Tyr
 65 70 75 80
 Val Glu Glu Thr Lys Glu Ala Glu Val Asp His Gly Ser Asn Asp Lys
 85 90 95
 Thr Gly Lys Glu Ser Gly Glu Lys Lys Glu Asp Ala Leu Ser Lys Glu

100 105 110
 Gly Ala Ala Gly Asn Asn Gly Asn Ile His Glu Gln Gln Ser Gly Lys
 115 120 125
 Ile Ser Lys Leu Asp Asn Ile Ala Gln Asp Gly Gly Ala Asp Glu Lys
 130 135 140
 Pro Ala Gly Val Pro Lys Ser Glu Asn
 145 150

<210> 951
 <211> 107
 <212> PRT
 <213> Pinus radiata

<400> 951
 Met Asn Leu Met Glu Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg
 1 5 10 15
 Arg Thr Val Arg Gly Lys Thr Gln Leu Lys Arg Ile Glu Asn Gly Thr
 20 25 30
 Ser Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys
 35 40 45
 Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val
 50 55 60
 Phe Ser Pro Arg Gly Lys Leu Tyr Glu Phe Ala Asn Pro Ser Met Gln
 65 70 75 80
 Lys Met Leu Glu Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asn Pro Thr
 85 90 95
 Ser Thr Ala Lys Glu Gln Asp Val Gln Cys Leu
 100 105

<210> 952
 <211> 217
 <212> PRT
 <213> Pinus radiata

<400> 952
 Met Val Arg Gly Lys Thr Gln Met Lys Arg Ile Glu Asn Asp Thr Ser
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Ile Ile Phe
 35 40 45
 Ser Pro Arg Gly Lys Leu Tyr Glu Phe Ala Ser Pro Ser Met Glu Glu
 50 55 60
 Ile Leu Glu Lys Tyr Lys Lys Arg Ser Lys Glu Asn Gly Met Ala Gln
 65 70 75 80
 Thr Thr Lys Glu Gln Asp Thr Gln Tyr Ser Lys His Ser Lys Gln Lys
 85 90 95
 Leu Ala Asn Met Glu Glu Gln Ile Arg Ile Leu Glu Ser Thr Gln Arg
 100 105 110
 Lys Met Leu Gly Glu Gly Leu Glu Ser Cys Ser Met Ala Glu Leu Asn
 115 120 125
 Lys Leu Glu Ser Gln Ala Glu Arg Gly Leu Ser His Ile Arg Ala Arg
 130 135 140
 Lys Thr Glu Ile Leu Val Asp Gln Ile Glu Cys Leu Lys Arg Lys Glu
 145 150 155 160
 Arg Leu Leu Ser Glu Glu Asn Ala Leu Leu Ser Arg Lys Trp Val Asp
 165 170 175
 Arg Gln Ser Val Asp Gly Ser Gly Ser Thr Ser Ser Ser Ile Gly Leu
 180 185 190
 Gly Ser Ile Glu Gln Ile Glu Val Glu Thr Gln Leu Val Ile Arg Pro
 195 200 205

Pro Asn Ala Gln Asp His Cys Ser Val
210 215

<210> 953
<211> 183
<212> PRT
<213> Pinus radiata

<400> 953
Met Glu Ser Glu Glu Asp Lys Ile Ser Pro Glu Asn Lys Lys Arg Arg
1 5 10 15
Leu Lys Thr Pro Gln Gln Val Glu Gly Leu Glu Ser Phe Tyr Ala Glu
20 25 30
His Lys Tyr Pro Ser Glu Ala Met Lys Ser Gln Leu Ser Glu Glu Leu
35 40 45
Gly Leu Thr Glu Lys Gln Val Gln Gly Trp Phe Cys His Arg Arg Leu
50 55 60
Lys Asp Lys Arg Leu Met Lys Glu Glu Ala Ser Asn Asn Gly Lys Gln
65 70 75 80
Asp Pro His Asn Gly Ile Met Gln Asp Ser Val Asn Gly Val Lys Gln
85 90 95
Asp Ser Ser Gly Ser Gly Lys Lys Ser Asp His Gln Arg His Ser Arg
100 105 110
Cys Lys Glu Val Glu Ser Gln Arg Phe Ala Asn Ala Met Asp Tyr Pro
115 120 125
Ala Ala Val Leu Ala Ser Glu Leu Arg Asp His Asp Leu Phe Lys Val
130 135 140
Asn His Asp Asn Glu Asp Thr Phe Ala Gly Ser Ser Ser Ala Ser Gln
145 150 155 160
Asp Arg Ser Ser Leu Gln Ser Gly Asn Pro Tyr Glu Ala Glu Ala Arg
165 170 175
Arg Arg Pro Phe Gln Asn Gly
180

<210> 954
<211> 105
<212> PRT
<213> Pinus radiata

<400> 954
Ala Leu Phe Gly Ala Val Gln Ser Leu Pro Val Phe Thr Phe Ala Asn
1 5 10 15
Gln Ala Gly Leu Asp Met Leu Glu Thr Thr Leu Val Ala Leu Gln Asp
20 25 30
Ile Ser Leu Glu Lys Ile Leu Asp Asp Asn Gly Arg Lys Ser Phe Cys
35 40 45
Ser Asp Ile Ala Gln Ile Met Gln Gln Gly Tyr Ala Tyr Leu Pro Ala
50 55 60
Gly Val Cys Val Ser Ser Met Gly Arg Pro Ala Ser Tyr Asp Arg Ala
65 70 75 80
Ile Ala Trp Lys Val Leu Asn Asp Glu Glu Asn Pro His Cys Ile Ala
85 90 95
Phe Met Phe Met Asn Trp Ser Phe Val
100 105

<210> 955
<211> 85
<212> PRT
<213> Pinus radiata

<400> 955

Gln Arg Ile Trp His Glu Pro Ala Ser Asn Asn Lys Phe Thr Tyr Asn
 1 5 10 15
 Cys Asp Asn His Thr Phe Asn Tyr Leu Val Glu Asp Gly Phe Ala Tyr
 20 25 30
 Cys Val Val Ala Asp Glu Ser Val Gly Arg Gln Val Pro Met Ala Phe
 35 40 45
 Leu Glu Arg Val Lys Glu Asp Phe Lys Arg Arg Tyr Gly Gly Arg
 50 55 60
 Ala Asp Thr Ala Val Ala Asn Ser Leu Asn Arg Asp Phe Gly Ser Lys
 65 70 75 80
 Leu Lys Glu His Met
 85

<210> 956

<211> 119

<212> PRT

<213> Pinus radiata

<400> 956

Val Asn Ser Asn Gln Ser Asn Met Leu Ile Leu Gln Glu Ser Cys Thr
 1 5 10 15
 Asp Ala Ser Gly Ser Phe Val Ile Tyr Ala Pro Val Asp Ile Val Ala
 20 25 30
 Met Asn Val Val Leu Ser Gly Gly Asp Pro Asp Tyr Val Ala Leu Leu
 35 40 45
 Pro Ser Gly Phe Ala Ile Leu Pro Asp Gly Pro Lys Cys Met Ala Val
 50 55 60
 Thr Asn Ser Gly Ile Asn Asp Leu Gly Ser Gly Gly Ser Leu Leu Thr
 65 70 75 80
 Val Ala Phe Gln Ile Leu Val Asp Ser Val Pro Thr Ala Lys Leu Ser
 85 90 95
 Leu Gly Ser Val Ala Thr Val Asn Ser Leu Ile Ser Cys Thr Val Asp
 100 105 110
 Arg Ile Lys Ala Ala Val Thr
 115

<210> 957

<211> 90

<212> PRT

<213> Pinus radiata

<400> 957

Gln Leu Leu Phe His Leu Arg Ser Gln Ser Ile Ser Pro Leu Val Thr
 1 5 10 15
 Cys Leu Arg Ser His Arg Ala Pro Pro Trp Pro Thr Pro Ile Ser Trp
 20 25 30
 Leu Cys Ile Ile Ile Arg Val Met Thr Glu Glu Gln Met Glu Thr Leu
 35 40 45
 Arg Arg Gln Ile Cys Val Tyr Ser Thr Ile Gly Ser Gln Leu Val Glu
 50 55 60
 Met His Arg Ala Met Ser Gln Gln Gln Ala Phe Phe Ser Gly Arg Leu
 65 70 75 80
 Cys Leu Trp Asp Asn Thr Cys Phe Met Ile
 85 90

<210> 958

<211> 103

<212> PRT

<213> Pinus radiata

<400> 958

```

Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1           5           10           15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20           25           30
Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
 35           40           45
Ser Ser Arg Gly Lys Leu Tyr Glu Phe Gly Ser Ala Gly Tyr Gly Ile
 50           55           60
Glu Ile Ser Gly Leu Phe Ser Gly Ile Leu Tyr Tyr Asn Ile Arg Val
 65           70           75           80
Gly Glu Gly Cys Glu Gly Glu Lys Arg Gly Cys Lys Val Tyr Ser Val
 85           90           95
Ile Cys Phe Lys Gly Lys Ser
100

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<210> 959

<211> 63

<212> PRT

<213> Pinus radiata

<400> 959

```

Met Val Arg Gly Lys Ile Gln Met Lys Arg Ile Glu Asn Thr Ala Ser
 1           5           10           15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20           25           30
Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Met Ile Phe
 35           40           45
Ser Pro Gly Gly Lys Leu Tyr Glu Phe Ala Asn Thr Ser Met Glu
 50           55           60

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<210> 960

<211> 60

<212> PRT

<213> Pinus radiata

<400> 960

```

Met Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg
 1           5           10           15
Glu His Arg Ser Glu Trp Ala Asp Cys Asn Ile Asp Ala Tyr Ser Ser
 20           25           30
Ala Thr Met Lys Ala Asn Ala Tyr Asn Val Pro Gly Ser Leu Gly Gly
 35           40           45
Ile Thr Gly Ser Gln Val Ile Leu Pro Leu Ala His
 50           55           60

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<210> 961

<211> 52

<212> PRT

<213> Pinus radiata

<400> 961

```

Thr Ser Arg Leu His Phe Val Asp Gln Gln Leu Arg Gln Gln Arg Ala
 1           5           10           15
Leu Gln Gln Leu Gly Met Ile Gln Gln His Ala Trp Arg Pro Gln Arg
 20           25           30
Gly Leu Pro Glu Arg Ala Val Ser Ile Leu Arg Ala Trp Leu Phe Glu
 35           40           45
His Phe Leu His
 50

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<210> 962

<211> 154
 <212> PRT
 <213> Pinus radiata

<400> 962
 Ala Val Val Ile Trp Met Gly Asp Pro Glu Arg Thr Lys Met Pro Pro
 1 5 10 15
 Ile Lys Ile Thr Ile Thr Ile Thr Ile Met Ile Thr Ser Ser Ser Arg
 20 25 30
 Arg Gly Gly Asn Val Thr Thr Asp Thr Leu Leu Val Lys Phe Arg Arg
 35 40 45
 Trp Lys Arg Cys Leu Arg Ser Val His Ile Leu Met Thr Asn Lys Gly
 50 55 60
 Ser Gly Ser Ala Leu Asn Trp Ala Leu Lys Pro Arg Gln Val Lys Phe
 65 70 75 80
 Trp Phe Gln Asn Arg Arg Thr Gln Met Lys Ala Gln Gln Asp Arg Ser
 85 90 95
 Asp Asn Ala Ile Leu Arg Ala Glu Asn Glu Asn Leu Arg Asn Glu Asn
 100 105 110
 Val Ala Leu Arg Glu Ala Ile Lys Asn Gly Ala Cys Pro Asn Cys Gly
 115 120 125
 Gly Ser Thr Ser Leu Gly Glu Met Pro Gly Phe Asp Glu His His Phe
 130 135 140
 Arg Ile Glu Asn Thr Arg Leu Lys Glu Glu
 145 150

<210> 963
 <211> 143
 <212> PRT
 <213> Pinus radiata

<400> 963
 Arg Ile Leu Lys Leu Glu Ile Pro Thr Ser Tyr Leu Val Cys Lys Ala
 1 5 10 15
 Arg Lys Met Gly Lys Lys Lys Val Glu Val Lys Leu Ile Gln Asn Pro
 20 25 30
 Thr Ser Arg Gln Gly Cys Phe Tyr Asn Arg Lys Cys Gly Leu Leu Lys
 35 40 45
 Lys Ala Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile
 50 55 60
 Ile Phe Ser Gln Thr Gly Lys Ile Tyr Glu Phe Ala Ser His Asp Asp
 65 70 75 80
 Val Asn Ala Ile Leu Ala Lys Tyr Arg Ile Gln Thr Gly Thr Thr Thr
 85 90 95
 Asn Ala Met Pro Ser Ser Leu Gln Asn Thr Glu Pro Glu Thr Leu His
 100 105 110
 Glu Glu Thr Asn Met Leu Gly Lys Arg Lys Lys Val Glu Lys Leu His
 115 120 125
 Glu Lys Ile Asn Met Leu Glu Lys Arg Gly Lys Asn Met Val Trp
 130 135 140

<210> 964
 <211> 123
 <212> PRT
 <213> Pinus radiata

<400> 964
 Asp His His Ala Val Glu Asp Arg Glu Leu Lys Asn His Leu Leu Arg
 1 5 10 15
 Lys Tyr Ser Gly Tyr Leu Ser Ser Leu Lys Gln Glu Phe Met Lys Lys
 20 25 30

Lys Lys Lys Gly Lys Leu Pro Lys Asp Ala Arg Gln Lys Leu Leu Asp
 35 40 45
 Trp Trp Ser Leu His Asp Lys Trp Pro Tyr Pro Ser Glu Thr Glu Lys
 50 55 60
 Ile Ala Leu Ala Glu Cys Thr Gly Leu Asp Gln Lys Gln Ile Asn Asn
 65 70 75 80
 Trp Phe Ile Asn Gln Arg Lys Arg His Trp Lys Pro Ser Glu Asp Met
 85 90 95
 His Phe Met Val Met Asn Ser His Ser Pro His Ser Ala Ala Leu Tyr
 100 105 110
 Val Glu Arg His Met Met Thr Glu Gly Tyr Leu
 115 120

<210> 965
 <211> 71
 <212> PRT
 <213> Pinus radiata

<400> 965
 Met Glu His Leu Asn Ala Ala Ala Gln Ala Ser Ser Ser Leu Tyr
 1 5 10 15
 Gly Val Ser Met Ala Glu Tyr Gly Asp Val Gly Val Ser Ser Met Met
 20 25 30
 Ala Leu Met Thr Gln His Glu Pro His Glu Ser Glu Ser Thr Met Thr
 35 40 45
 Thr Ser Met Pro Ser Ser Phe Ser Ser Phe His Gly His Ala Glu Cys
 50 55 60
 Leu Leu Ser Ala Ala Met Phe
 65 70

<210> 966
 <211> 111
 <212> PRT
 <213> Pinus radiata

<400> 966
 Met Gly Arg Gly Lys Ile Glu Ile Lys Lys Ile Glu Asn Ser Val His
 1 5 10 15
 Arg Gln Val Thr Phe Cys Lys Arg Arg Gly Gly Leu Met Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ala Leu Ile Val Phe
 35 40 45
 Ser Ser Arg Gly Lys Leu Tyr Glu Leu Gly Thr Ser Asn Asn Asn
 50 55 60
 Asn Ser Met Arg Ser Ile Leu Glu Arg Tyr Gln Lys Cys Ser Gln Thr
 65 70 75 80
 Ala Lys His Met Asn Phe Ser Asn Asn Thr Ser Asp Glu Lys Met Lys
 85 90 95
 Gln Glu Ile Asn Leu Leu Lys His Lys Leu Ile Ser Thr Tyr Gln
 100 105 110

<210> 967
 <211> 106
 <212> PRT
 <213> Pinus radiata

<400> 967
 Met Asn Tyr Glu Gln Arg Leu Ile Ala Ala Ala Arg Leu Ala Asp Asn
 1 5 10 15
 Leu Asn Ser Thr Thr Ala Lys Glu Phe Asp Ile Pro Ser Ala Glu Glu
 20 25 30

```

Val Ala Glu Lys Cys Ser Glu Trp Gly Val Thr Ala Gln Leu Lys Ala
      35              40              45
His Gln Ala Gln Gly Leu Ser Trp Leu Ile Arg Arg Tyr Ala Ile Gly
      50              55              60
Val Asn Val Ile Leu Gly Asp Glu Met Gly Leu Gly Lys Thr Leu Gln
      65              70              75              80
Ala Ile Ser Leu Leu Ala Tyr Leu Lys Asp Arg Arg Lys Cys Pro Gly
      85              90              95
Pro Phe Leu Val Leu Cys Pro Leu Ser Val
      100              105

```

<210> 968

<211> 257

<212> PRT

<213> Pinus radiata

```

<400> 968
Ser Val Asp Val Leu Thr Ala Phe Ser Thr Gly Asn Gly Gly Thr Ile
      1              5              10              15
Glu Leu Leu Tyr Met Gln Met Tyr Ala Pro Thr Thr Leu Ala Ser Ala
      20              25              30
Arg Asp Phe Trp Thr Leu Arg Tyr Thr Ser Val Leu Glu Asp Gly Ser
      35              40              45
Leu Val Val Cys Glu Arg Ser Leu Ser Gly Thr Gln Gly Gly Pro Ser
      50              55              60
Met Pro Ala Val Gln Gln Phe Val Arg Ala Glu Met Gln Pro Ser Gly
      65              70              75              80
Tyr Leu Ile Arg Pro Cys Glu Gly Gly Gly Ser Leu Ile His Ile Val
      85              90              95
Asp His Met Asp Leu Glu Pro Trp Ser Val Pro Glu Val Leu Arg Pro
      100              105              110
Leu Tyr Glu Ser Ser Thr Val Leu Ala Gln Lys Val Thr Met Ser Ala
      115              120              125
Leu Arg His Leu Arg Gln Ile Ala Gln Glu Ala Ser Ser Asp Val Val
      130              135              140
Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Thr Phe Ser Gln Arg
      145              150              155              160
Leu Cys Lys Gly Phe Asn Glu Ala Val Asn Gly Phe Thr Asp Asp Gly
      165              170              175
Trp Ser Leu Met Gly Asn Asp Gly Met Glu Asp Val Thr Ile Leu Val
      180              185              190
Asn Ser Ser Ser Pro Ser Lys Leu Phe Gly Gln Gln Phe Ala Ser Ser Asp
      195              200              205
Gly Leu Pro Ala Leu Gly Gly Gly Ile Leu Cys Ala Lys Ala Ser Met
      210              215              220
Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg Glu
      225              230              235              240
His Arg Ser Glu Trp Ala Asp Ser Asn Ile Asp Ala Tyr Ser Ala Ala
      245              250              255
Ser

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<210> 969

<211> 135

<212> PRT

<213> Pinus radiata

```

<400> 969
Met Ala Met Glu Glu Glu Arg Ser Gly Asp Leu Leu Lys Gly Cys Gly Leu
      1              5              10              15
Ser Glu Asn Ala Leu Asp Ala Ile Ser Glu Gly Ser Ile Gln Asn His

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      20              25              30
Trp Ser Trp Ser Glu Val Lys Gln Leu Ser Val Thr Leu Arg Ala
  35              40              45
Leu Asp Ala Gly Ile Glu His Ser Leu Leu Gly Ser Met Met Ser Ile
  50              55              60
Asp Arg Tyr Ala Ala Ala Glu Ser Phe His Arg Leu Ala Trp Ala Tyr
  65              70              75
Ala His Val Pro Asp Leu His Ile Met Trp Leu Leu His Leu Cys Asp
      85              90              95
Ala His Gln Glu Met Gln Ser Trp Ala Glu Ala Ala Gln Cys Ala Val
      100              105              110
Ala Val Ala Gly Val Ile Met Gln Ala Leu Val Gly Arg Asn Asp Ala
      115              120              125
Val Trp Gly Lys Glu His Val
      130              135

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<210> 970
 <211> 128
 <212> PRT
 <213> Pinus radiata

```

      <400> 970
Arg Gly Arg Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Ser Arg Gln
  1              5              10              15
Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Met Lys Lys Ala Ala Glu
      20              25              30
Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe Ser Asn
      35              40              45
Lys Asp Lys Leu Tyr Glu Phe Ala Ser Ser Ser Met Thr Lys Ile Leu
      50              55              60
Glu Arg Tyr Arg Lys Arg Ser Asn Leu Ile Gln Asp Ile Gly Lys Asp
      65              70              75
Pro Gln Asn Ser Asp Ile Glu Leu Thr Arg Leu Lys Glu Glu Val Asp
      85              90              95
Arg Leu Gln Arg Ser Arg Arg His Leu Leu Gly Glu Asp Leu His Gln
      100              105              110
Leu Gly Ala Thr Asp Leu Gln His Leu Glu Gln Gln Leu Glu Ala
      115              120              125

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<210> 971
 <211> 147
 <212> PRT
 <213> Pinus radiata

```

      <400> 971
Met Asp Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg Arg Thr Val
  1              5              10              15
Arg Gly Lys Thr Gln Met Lys Arg Ile Glu Asn Ala Thr Ser Arg Gln
      20              25              30
Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala Tyr Glu
      35              40              45
Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Met Val Phe Ser Pro
      50              55              60
Arg Gly Lys Leu Tyr Glu Phe Ala Asn Pro Ser Met Gln Lys Met Leu
      65              70              75
Glu Arg Tyr Glu Lys Cys Ser Glu Gly Ser Lys Thr Thr Ser Ile Ala
      85              90              95
Lys Glu Glu Asp Pro Lys Ala Leu Lys Arg Glu Ile Ala Asn Met Glu
      100              105              110
Glu Arg Ile Glu Ile Leu Glu Arg Thr Gln Arg Lys Met Leu Gly Glu
      115              120              125

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Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln
 130 135 140
 Val Glu Arg
 145

<210> 972
 <211> 45
 <212> PRT
 <213> Pinus radiata

<400> 972
 Met Glu Lys Gln Asn Ser Gly Glu Asp Ser Asp Ser Lys Gly Gln Leu
 1 5 10 15
 Asp Asn Gly Lys Tyr Val Arg Tyr Thr Asn Glu Gln Val Glu Thr Leu
 20 25 30
 Glu Arg Ala Tyr Asn Glu Cys Ser Lys Pro Ser Thr Ser
 35 40 45

<210> 973
 <211> 97
 <212> PRT
 <213> Pinus radiata

<400> 973
 Met Gly Ala Phe Ala Leu Leu Ser Ser Trp Ile Asp Ala Ala Thr Asn
 1 5 10 15
 Pro Lys Tyr Arg Lys Lys Arg Lys Gln Phe Gln Thr Val Glu Leu Arg
 20 25 30
 Val Arg Met Asp Cys Glu Gly Cys Glu Arg Lys Val Arg Asn Ala Leu
 35 40 45
 Asn Ser Met Lys Gly Val Ser Ser Val Glu Val Glu Arg Lys Gln Tyr
 50 55 60
 Lys Ala Thr Val Thr Gly Tyr Val Asp Ala Asn Lys Val Leu Lys Arg
 65 70 75 80
 Val Arg Gln Thr Gly Lys Lys Ala Glu Leu Trp Pro Tyr Lys Pro Tyr
 85 90 95
 His

<210> 974
 <211> 135
 <212> PRT
 <213> Pinus radiata

<400> 974
 Phe Ser Asn Thr Trp Phe Ser Gly Asn Leu Leu Ala Pro Gly Ala Asn
 1 5 10 15
 Lys Gln Met His Leu Asp Ser Ser Ser Thr Gly Ala Pro Gly Leu Ser
 20 25 30
 Asn Val Leu Ile Gly Ser Lys Tyr Leu Lys Ala Ala Gln Gln Leu Leu
 35 40 45
 Asp Glu Val Val Asn Val Gly Lys Gly Ile Lys Pro Asp Ser Ala Lys
 50 55 60
 His Gln Lys Ser Gln Ser Trp Ile Gly Thr Thr Ala Asn Lys Glu Asn
 65 70 75 80
 Ser Gly Ala Glu Gly Gly Lys Asp Gly Ala Ala Ala Pro Thr
 85 90 95
 Trp Arg Ser Thr Ser Ala Gln Glu Thr Asn Asp Arg Pro Ser Glu Leu
 100 105 110
 Ser Pro Ala Glu Arg Gln Glu Leu Gln Met Lys Lys Ala Lys Leu Val
 115 120 125

Ala Met Leu Asp Glu Val Asp
130 135

<210> 975
<211> 93
<212> PRT
<213> Pinus radiata

<400> 975
Tyr Ser Glu Val Arg Thr Arg Ala Arg Phe Trp Arg Arg Lys Gly Arg
1 5 10 15
Val Arg Arg Phe Lys Tyr Thr Cys Lys Ser Ala Gly His Pro Ser Ile
20 25 30
Arg Lys Arg Ile Lys Asp Gly Lys Gly Gln Pro Cys Arg Gln Tyr Thr
35 40 45
Pro Cys Gly Cys Gln Leu Thr Cys Gly Lys Gln Cys Pro Cys Leu Arg
50 55 60
Asn Gly Thr Cys Cys Glu Lys Tyr Cys Gly Cys Ser Lys Ser Cys Lys
65 70 75 80
Asn Arg Phe Arg Gly Cys His Cys Ala Lys Ser Gln Cys
85 90

<210> 976
<211> 114
<212> PRT
<213> Pinus radiata

<400> 976
Ala Asp Glu Ser Leu Trp Ile Pro Asn Leu Asp Ala Gly Lys Glu Thr
1 5 10 15
Leu Ser Tyr Glu Glu Tyr Met Arg Gln Phe Pro Ser Thr Ile Thr Pro
20 25 30
Lys Pro Ile Gly Leu Ala Thr Glu Ala Thr Arg Glu Thr Gly Met Val
35 40 45
Ile Thr Asn Ser Leu Asn Leu Val Glu Thr Leu Met Asp Val Asp His
50 55 60
Trp Lys Glu Met Phe Pro Cys Met Ile Ser Arg Ala Ala Thr Val Asp
65 70 75 80
Val Ile Ser Ser Gly Met Gly Gly Thr Arg Asn Gly Ala Leu Gln Leu
85 90 95
Met Tyr Ala Glu Leu Gln Val Leu Ser Pro Leu Val Pro Ala Arg Glu
100 105 110
Tyr Phe

<210> 977
<211> 148
<212> PRT
<213> Pinus radiata

<400> 977
Gln Ser Glu Asn Ile Met Ser Thr Arg Ile Pro Ser Ser Phe Ser Ser
1 5 10 15
Phe His Gly His Ala Asp Cys Leu Leu Ser Ala Ala Met Phe Gln Gly
20 25 30
Ser Gln Gly Asp His Lys Leu Asn Pro Gln Pro Gly Met Asn Gln Gln
35 40 45
Leu Val Ser Glu Gln Ser Ile Met Ser Asp Ser Ser Met Pro Phe Val
50 55 60
Lys Thr Lys Ala Cys Ser Gly Leu Arg Asn Gln Phe Glu Phe His Arg
65 70 75 80


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          180          185          190
Ala Asp Lys Lys Val Tyr Pro Gln Pro Ala Ser His Ser Asp Cys Val
          195          200          205
Gly Glu Pro Glu Arg Ser Thr Ala Ala Lys Asp Thr Pro Pro Gly Cys
          210          215          220
Lys His Glu Asp Leu Leu Ser Ser Gly Thr Asp Ser Ser Gly Val Leu
          225          230          235          240
Asp Glu Asp Ser Pro His His Val Asp Cys Gly
          245          250

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<210> 980
 <211> 128
 <212> PRT
 <213> Pinus radiata

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          <400> 980
Lys Ile Glu Asn Thr Thr Ser Arg Gln Val Thr Phe Cys Lys Arg Lys
   1           5           10           15
Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu Ser Leu Leu Cys Asp Ala
          20           25           30
Glu Val Ala Leu Leu Ile Phe Ser Thr Ser Gly Arg Leu Tyr Glu Phe
          35           40           45
Ala Asn Lys Ser Val Ser Ala Thr Thr Glu Arg Tyr Met Arg Thr Tyr
          50           55           60
Ala Glu Asn Met Pro Gln Ser Arg Ala Leu Tyr Pro Asp Cys His His
          65           70           75           80
Trp Gln Glu Glu Val Arg Lys Leu Thr Gln Gln Arg Asp Ser Leu Thr
          85           90           95
Asn Ser Ile Arg Gln Ile Met Gly Glu Gly Leu Glu Ser Leu Ser Met
          100          105          110
Lys Glu Leu Lys His His Ile Gln Val Gln Leu Glu Lys Ser Ile Ser Cys
          115          120          125

```

<210> 981
 <211> 119
 <212> PRT
 <213> Pinus radiata

```

          <400> 981
Tyr Thr Ala Glu Gln Val Glu Ala Leu Glu Arg Leu Tyr Asn Asp Cys
   1           5           10           15
Pro Lys Pro Ser Ser Leu Arg Arg Gln Gln Leu Ile Arg Glu Cys Pro
          20           25           30
Ile Leu Ser His Ile Glu Pro Lys Gln Ile Lys Val Trp Phe Gln Asn
          35           40           45
Arg Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser Arg Leu Gln Thr
          50           55           60
Val Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu Met Glu Glu Asn
          65           70           75           80
Asp Arg Leu Gln Lys Gln Val Ser Gln Leu Val Tyr Glu Asn Gly Tyr
          85           90           95
Phe Arg Gln Gln Ile Gln Thr Val Ser Ile Thr Thr Thr Asp Thr Ser
          100          105          110
Cys Glu Ser Val Val Thr Ser
          115

```

<210> 982
 <211> 85
 <212> PRT
 <213> Pinus radiata

<400> 982
 Lys His Glu Phe Asp Val Arg Tyr Gln Lys Leu Glu Asp Lys Leu Tyr
 1 5 10 15
 Ile Ala Gln Leu Tyr Phe Pro Leu Ile Gly Leu Ile Leu Asp Glu Met
 20 25 30
 Pro Val Phe Tyr Asn Leu Ser Thr Val Glu Lys Arg Glu Val Leu Ile
 35 40 45
 Cys Ile Met Gln Ile Ile Arg Asn Leu Asp Asp Pro Ser Leu Ile Lys
 50 55 60
 Ala Trp Gln Gln Ser Ile Ala Arg Thr Arg Leu Phe Phe Lys Leu Leu
 65 70 75 80
 Glu Glu Cys Leu Val
 85

<210> 983
 <211> 96
 <212> PRT
 <213> Pinus radiata

<400> 983
 Gly Leu Leu Val Thr Met Arg Leu Phe Ala Ala Thr Glu Pro Lys Arg
 1 5 10 15
 Val Phe Ala Val Thr Lys Arg Ile Phe Leu Leu Gly Phe Val Ser Phe
 20 25 30
 Phe Leu Arg Glu Gly Leu Val Ala Ser Val Trp Leu Pro Val Ser Pro
 35 40 45
 Gln Arg Leu Phe Asp Phe Leu Arg Asp Glu Arg Leu Arg Ser Lys Trp
 50 55 60
 Asp Ile Leu Ser Asn Gly Gly Pro Met Gln Glu Met Ala His Ile Pro
 65 70 75 80
 Lys Gly Gln Asp Pro Arg Asn Cys Val Ser Leu Leu Arg Ala Ser Ile
 85 90 95

<210> 984
 <211> 109
 <212> PRT
 <213> Pinus radiata

<400> 984
 Leu Val Ser Leu Tyr Asn Asn His Leu Asn Gly Ile Leu Ala Asp Glu
 1 5 10 15
 Met Gly Leu Gly Lys Thr Val Gln Val Ile Ser Leu Ile Cys Tyr Leu
 20 25 30
 Met Glu Gln Lys Asn Asp Arg Gly Pro Phe Leu Val Val Val Pro Ser
 35 40 45
 Ser Val Leu Ser Gly Trp Leu Ser Glu Ile Ser Phe Trp Ala Pro Ser
 50 55 60
 Ile Ser Lys Ile Ala Tyr Thr Gly Ser Pro Asp Asp Arg Arg Arg Leu
 65 70 75 80
 Phe Arg Glu Asn Ile Ser Gln Gln Lys Phe Asn Val Leu Leu Thr Thr
 85 90 95
 Tyr Glu Tyr Leu Met Asn Lys Arg Ser Thr Lys Thr Glu
 100 105

<210> 985
 <211> 52
 <212> PRT
 <213> Pinus radiata

<400> 985
 Pro Lys Asp Ala Asp Lys His Met Leu Ala Arg Gln Ala Gly Leu Thr

```

      1           5           10           15
Arg Ser Gln Val Ser Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp
      20           25           30
Lys Pro Met Val Glu Glu Ile Tyr Met Glu Glu Ile Lys Glu Ala Glu
      35           40           45
Leu Gly His Ser
      50

```

<210> 986
 <211> 101
 <212> PRT
 <213> Pinus radiata

```

      <400> 986
Gln Gln Asp Asp Asp Ala Lys Val Tyr Glu Ser Pro Leu Arg Arg Lys
      1           5           10           15
Asn Ala Glu Ala Pro Arg Thr Arg Trp Arg Phe Leu Pro Leu Glu Ser
      20           25           30
Ala Leu Glu Asn Pro Tyr Gln Gly Leu Met Lys His Cys Thr Ser Leu
      35           40           45
Leu Lys Thr Leu Met Asn His Lys Phe Gly Tyr Val Phe Asn Glu Pro
      50           55           60
Val Asp Pro Val Ala Leu Gly Val Pro Asp Tyr Phe Thr Val Ile Thr
      65           70           75           80
Ser Pro Met Asp Leu Gly Thr Ile Lys Ala Lys Leu Gln Asp Ser Val
      85           90           95
Tyr Ser Ser Pro Leu
      100

```

<210> 987
 <211> 230
 <212> PRT
 <213> Pinus radiata

```

      <400> 987
Cys Thr Gly Val Ala Ala Arg Ala Cys Gly Phe Ala Gly Leu Glu Pro
      1           5           10           15
Ser Lys Val Ala Asp Ile Leu Lys Asp Arg Pro Ala Trp Leu His Asp
      20           25           30
Cys Arg Arg Leu Asp Val Leu Thr Ala Phe Pro Thr Gly Lys Gly Gly
      35           40           45
Ala Val Glu Leu Leu Tyr Thr Gln Met Tyr Ala Pro Thr Thr Leu Ala
      50           55           60
Pro Ala Arg Asp Leu Leu Thr Leu Arg Tyr Thr Ser Leu Leu Glu Asp
      65           70           75           80
Gly Ser Leu Val Val Cys Glu Arg Ser Leu Thr Gly Thr Gln Ser Gly
      85           90           95
Pro Asn Met Pro Pro Val Gln His Phe Val Arg Ala Gln Met Leu Pro
      100           105           110
Ser Gly Tyr Leu Ile Arg Pro Cys Glu Gly Gly Cys Ile Ile His
      115           120           125
Ile Val Asp His Met Asp Leu Glu Pro Trp Ser Val Pro Glu Val Ile
      130           135           140
Arg Pro Leu Tyr Glu Ser Ser Ala Val Leu Ala Gln Lys Met Thr Ile
      145           150           155           160
Thr Ala Leu Arg His Leu Arg Gln Val Ala Gln Glu Val Ser Gly Glu
      165           170           175
Val Val Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Ala Phe Ser
      180           185           190
Gln Arg Leu Cys Arg Gly Phe Asn Asp Ala Val Asn Gly Phe Ala Asp
      195           200           205

```

Asp Gly Trp Ser Leu Leu Gly Ser Asp Gly Val Glu Asp Val Ile Ile
 210 215 220
 Ala Ile Asn Ser Ser Pro
 225 230

<210> 988
 <211> 164
 <212> PRT
 <213> Pinus radiata

<400> 988
 Gln Tyr Leu Arg Gln Gln Leu Gln Leu Leu His Ala Arg Ala Gly Asn
 1 5 10 15
 Asn Thr Arg Ser Leu Gln Gln Met Ala Val Thr Ala Asn Asp Thr Ser
 20 25 30
 Ser Asp Ser Val Val Thr Ser Gly Gln Arg Gln Gln His Ser Pro Gln
 35 40 45
 His Pro Pro Tyr Ser Val Ser Thr Ser Arg Leu Phe Phe Ile Ala Glu
 50 55 60
 Glu Thr Leu Thr Glu Phe Leu Ala Lys Ala Thr Gly Thr Ala Val Asp
 65 70 75 80
 Trp Ile Gln Met Pro Gly Met Lys Pro Gly Pro Asp Ser Ile Gly Val
 85 90 95
 Val Ala Val Ala His Ala Cys Gly Gly Val Ala Val Gln Ala Trp Gly
 100 105 110
 Val Val Ser Leu Glu Pro Ser Glu Val Ala Glu Ala Leu Arg Asp Lys
 115 120 125
 Val Ser Trp Leu Cys Asp Cys Arg Lys Met Glu Val Leu Gly Thr Phe
 130 135 140
 Asp Ser Thr Asp Gly Arg Lys Leu Glu Leu Leu His Thr Gln Met Tyr
 145 150 155 160
 Ala Pro Ile Thr

<210> 989
 <211> 107
 <212> PRT
 <213> Pinus radiata

<400> 989
 Met Gly Lys Thr Lys Met Glu Met Lys His Ile Gln Asn Pro Ser Arg
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Lys Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Phe
 35 40 45
 Ser Glu Thr Gly Lys Ile Ser Glu Phe Ala Ser His Asn Asp Met Ala
 50 55 60
 Thr Ile Leu Glu Lys Tyr Arg Ile Tyr Thr Gln Thr Glu Thr Asp Gly
 65 70 75 80
 Asn Met Gly Ala Ser Ser Val Gln Ser Val Lys Gly Trp Phe Pro Asn
 85 90 95
 Phe Leu Glu Ile Ala Gly Phe Ser Val Cys Gly
 100 105

<210> 990
 <211> 68
 <212> PRT
 <213> Pinus radiata

<400> 990

```

Met Gly Arg Gly Pro Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Asn
 1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Lys Lys Ala
 20          25          30
Ser Glu Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe
 35          40          45
Ser Asn Lys Gly Lys Leu Tyr Glu Phe Ser Ser Ser Met Thr Lys
 50          55          60
Ile Leu Glu Arg
65

```

<210> 991
 <211> 230
 <212> PRT
 <213> Pinus radiata

```

<400> 991
Leu Ser Leu Ser Pro Gln Gln Leu Ser Asn Ile Gln Leu Ser Cys Phe
 1          5          10          15
Gln Asn Gln Pro Thr Asp Ser Glu Val Asn Cys Pro Ser Ile Ser Glu
 20          25          30
Ala Thr Ser Gln Glu Asn Leu Asn Arg Ser Asp Arg Leu Thr Ser Lys
 35          40          45
Leu Ser Gly Ser Leu Ser Ser Phe Arg Ala Ser Ser Arg Asp Gly Met
 50          55          60
Leu Gly Thr Lys Phe Leu Gly Ser Val Asn Gly Pro Glu Cys Asn Lys
 65          70          75          80
Pro Met His His Gly Thr Asn Ala Ile Gly Ala Ala Glu Leu Ser Asn
 85          90          95
Thr Leu Thr Gly Ser Lys Tyr Phe Lys Ala Ala Gln Gln Leu Leu Asp
 100          105          110
Glu Val Val Asn Val Gly Lys Gly Ile Lys Ser Asp Ser Val Asn His
 115          120          125
Gln Lys Ser Gln Thr Trp Phe Gly Ala Ile Ser Asp Lys Lys Asn Ile
 130          135          140
Ala Thr Glu Ala Thr Thr Asn Asp Arg Thr Thr Ser Ala Ile Thr Gly
 145          150          155          160
Ala Ser Ile Ser Ala Glu Val Met Lys Asn Glu His Ala Phe Gly Leu
 165          170          175
Thr Pro Ala Asp Arg Gln Glu Leu Gln Met Lys Lys Ala Lys Leu Val
 180          185          190
Ala Met Leu Asp Glu Val Asp Arg Arg Tyr Arg Gln Tyr Tyr His Gln
 195          200          205
Met Gln Ile Val Val Ser Ser Phe Glu Thr Ala Ala Gly Phe Gly Ala
 210          215          220
Ala Lys Thr Tyr Thr Ser
 225          230

```

<210> 992
 <211> 76
 <212> PRT
 <213> Pinus radiata

```

<400> 992
Met Gly Arg Gly Lys Ile Glu Leu Lys Lys Ile Glu Ser Thr Ser Asn
 1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Met Gly Leu Leu Lys Lys Ala
 20          25          30
Gln Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Val Ile Phe
 35          40          45
Ser Asn Thr Gly Arg Leu Tyr Asp Phe Ser Ser Ser Ser Met Glu Lys

```

50 55 60
Met Ile Glu Thr Tyr Tyr Arg Phe Ile Glu Lys Asn
65 70 75

<210> 993
<211> 77
<212> PRT
<213> Pinus radiata

<400> 993
Val Thr Leu Phe Leu Val Leu Gln Val Leu Asp Arg Gly Glu Lys Ile
1 5 10 15
Glu Leu Leu Val Asp Lys Thr Glu Asn Leu Arg Phe Gln Ala Gln Asp
20 25 30
Phe Gln Lys Gln Gly Thr Gln Leu Arg Arg Lys Met Trp Phe Gln Asn
35 40 45
Met Lys Val Lys Leu Val Val Leu Gly Ile Val Phe Val Leu Ile Leu
50 55 60
Ile Ile Trp Leu Ser Ile Cys His Gly Phe Lys Cys His
65 70 75

<210> 994
<211> 110
<212> PRT
<213> Pinus radiata

<400> 994
Pro Asn Ser Arg Ser Asp Gly Asn Gly Lys Ala Asp Arg Ser Asp Ser
1 5 10 15
Met Gly Thr Glu Ala Arg Thr Arg Thr Arg Phe Trp Arg Arg Arg Gly
20 25 30
Arg Val Arg Arg Leu Lys Tyr Thr Trp Lys Ser Ala Gly His Pro Ser
35 40 45
Ile Lys Lys Arg Ile Ala Asp Ser Lys Asp Gln Pro Cys Arg Gln Phe
50 55 60
Thr Pro Cys Asp Cys Gln Ser Met Cys Gly Lys Gln Cys Pro Cys Leu
65 70 75 80
Arg Ser Gly Thr Cys Cys Glu Lys Tyr Cys Gly Cys Ser Lys Gly Cys
85 90 95
Lys Asn Arg Phe Arg Gly Cys His Cys Ala Lys Ser Gln Cys
100 105 110

<210> 995
<211> 293
<212> PRT
<213> Pinus radiata

<400> 995
Ala Ser Gln Phe Ser Gly Asn Asp Met Arg Asn Tyr Gly Ala Lys Glu
1 5 10 15
Val Thr Ser Gly Leu Ala Thr Gly Gly Gln Arg Pro Pro Ala Leu Gln
20 25 30
Leu Asn Leu Ala Ala Leu Asp Ser Ser Gly Asp Gly Ala Ala Lys
35 40 45
Glu Lys Arg Thr Pro Lys Val Asn Pro Tyr Tyr Leu Asn Ser Glu Phe
50 55 60
Val Met Gly Lys Asp Lys Met Pro Pro Pro Pro Pro Asp Asn Lys Lys
65 70 75 80
Gly Gly Met Lys Arg Thr Ala Gln Gly Lys Ser Glu Ile Arg Glu Thr
85 90 95
Lys Arg Pro Val Ala Asp Pro Met Asn Gly Lys Ile Leu Gln Asp Val

100 105 110
 Met Lys Gln Cys Gly Phe Leu Leu Ser Arg Leu Ile Lys His Lys His
 115 120 125
 Gly Trp Val Phe Lys Ala Pro Val Asp Thr Val Ala Leu Gly Leu His
 130 135 140
 Asp Tyr Asn Thr Ile Ile Lys Gln Pro Met Asp Leu Gly Thr Ala Lys
 145 150 155 160
 Ala Lys Leu Asn Ala Asn Glu Tyr Lys Ser Pro Gln Glu Phe Ala Gly
 165 170 175
 Asp Ile Arg Leu Thr Phe Asn Asn Ala Met Thr Tyr Asn Pro Asn Gly
 180 185 190
 His Glu Val His Ile Met Ala Glu Gln Met Leu Gln Phe Phe Glu Asp
 195 200 205
 Arg Trp Lys Pro Ile Cys Asp Arg Tyr Glu Glu Glu Lys Arg Lys Leu
 210 215 220
 Ser Trp Ser Val Asn Asp Gly Leu Leu Pro Gly Ala Ser Gln Asn Met
 225 230 235 240
 Lys Asn Phe Pro Phe Gly Glu Thr Pro Lys Lys Asn Leu Lys Lys Thr
 245 250 255
 Glu Pro Leu Leu Gly Leu Ser Pro Arg Pro Pro Pro Asn Ala Lys Ser
 260 265 270
 Lys Ala Asn Gln Thr Leu Arg Ala Pro Ala Pro Lys Lys Pro Lys Ala
 275 280 285
 Lys Asp Leu His Lys
 290

<210> 996
 <211> 144
 <212> PRT
 <213> Pinus radiata

<400> 996
 Lys Phe Asp Ile Cys Val Thr Ser Phe Glu Met Ala Ile Lys Glu Lys
 1 5 10 15
 Thr Ala Leu Lys Arg Phe Ser Trp Arg Tyr Ile Ile Ile Asp Glu Ala
 20 25 30
 His Arg Ile Lys Asn Glu Asn Ser Leu Leu Ala Lys Thr Met Arg Ile
 35 40 45
 Tyr Ser Thr Asn Tyr Arg Leu Leu Ile Thr Gly Thr Pro Leu Gln Asn
 50 55 60
 Asn Leu His Glu Leu Trp Ser Leu Leu Asn Phe Leu Leu Pro Glu Ile
 65 70 75 80
 Phe Ser Ser Ala Glu Thr Phe Asp Asp Trp Phe Gln Ile Ser Ala Asp
 85 90 95
 Asn Asp Gln Gln Glu Val Val Gln Gln Leu His Lys Val Leu Arg Pro
 100 105 110
 Phe Leu Leu Arg Arg Leu Lys Ser Asp Val Glu Lys Gly Leu Pro Pro
 115 120 125
 Lys Lys Glu Thr Ile Leu Lys Val Gly Met Ser Gln Met Gln Lys Gln
 130 135 140

<210> 997
 <211> 81
 <212> PRT
 <213> Pinus radiata

<400> 997
 Met Gly Arg Gly Lys Ile Glu Thr Lys Lys Ile Glu Asn Ser Val Arg
 1 5 10 15
 Arg Gln Val Thr Phe Trp Lys Arg Gly Gly Leu Met Lys Lys Ala
 20 25 30


```

Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe
      35          40          45
Ser Gly Arg Gly Lys Leu Tyr Glu Leu Glu Thr Ser His Ser Asn Arg
      50          55          60
Asn Lys Tyr Ala Pro Tyr Ser Thr Ser Thr Thr His Gln Cys Arg Trp
      65          70          75          80
Phe

```

```

<210> 998
<211> 114
<212> PRT
<213> Pinus radiata

```

```

<400> 998
Tyr Tyr Leu Ile Val Ile Asp Ala Lys Val Ile Gln Ala Gly Leu Phe
  1          5          10          15
Asn Asn Thr Ser Thr Ala Gln Asp Arg Glu Met Leu Glu Glu Ile
      20          25          30
Met Arg Arg Gly Thr Asn Ser Leu Gly Thr Asp Val Pro Ser Glu Arg
      35          40          45
Glu Ile Asn Arg Leu Ala Ala Arg Ser Asp Glu Glu Phe Trp Leu Phe
      50          55          60
Glu Lys Met Asp Glu Glu Arg Arg Gln Lys Glu Gly Tyr Arg Ser Arg
      65          70          75          80
Leu Met Glu Glu His Glu Val Pro Asp Trp Val Phe Ser Val Pro Thr
      85          90          95
Gly Lys Asn Asp Lys Gly Val Glu Asn Met Asp Ser Asn Leu Gly Phe
      100          105          110
Asp Gln

```

```

<210> 999
<211> 183
<212> PRT
<213> Pinus radiata

```

```

<400> 999
Ala Asp Ser Pro His Phe Asn Glu Ala Asp Ala Ile Lys Ser Lys Ile
  1          5          10          15
Leu Ala His Pro Gln Tyr Pro Asn Leu Leu Gly Ala Tyr Ile Asp Cys
      20          25          30
Gln Lys Ile Gly Ala Pro Pro Glu Val Ala Ala Arg Leu Asp Ala Leu
      35          40          45
Ser His Glu Tyr Glu Asn Gln Gln His Arg Ser Ser Leu Ser Ile Gly
      50          55          60
Met Asp Pro Glu Leu Asp Gln Phe Met Glu Ala Tyr Cys Glu Met Leu
      65          70          75          80
Thr Lys Tyr His Glu Glu Leu Thr Lys Pro Phe Lys Glu Ala Met Ser
      85          90          95
Phe Leu Lys Lys Ile Glu Ala Gln Leu Asn Ser Leu Gly Lys Gly Thr
      100          105          110
Ile Arg Ile Ser Pro Ser Ala Glu Asn Asp Glu Lys Thr Glu Gly Gly
      115          120          125
Ala Ser Ser Glu Glu Val Glu Asp Gly Ser Gly Gly Glu Thr Asp Phe
      130          135          140
Gln Glu Val Asp His His Ala Val Glu Asp Arg Glu Leu Lys Asp His
      145          150          155          160
Leu Leu Arg Lys Tyr Ser Gly Tyr Leu Ser Ser Leu Lys Gln Glu Phe
      165          170          175
Met Lys Lys Lys Lys Lys

```

180

<210> 1000
 <211> 122
 <212> PRT
 <213> Pinus radiata

<400> 1000

```

Cys Lys Asn Val Phe Thr Arg Leu Gln Gly Pro Val Lys Glu Gly Arg
 1                               10                      15
His Thr Ala Leu Phe Met Glu Ile Pro Lys Arg Asn Glu Asn Pro Thr
                20                      25                      30
Tyr Tyr Arg Leu Ile Glu Asn Pro Ile Asp Ala Arg Thr Ile Glu Gln
                35                      40                      45
Arg Leu Asp Arg Phe Ser Tyr Gly Ser Val Leu Asp Phe Ala Ala Asp
 50                               55                      60
Val Gln Leu Met Leu Glu Asn Ala Ile Arg Phe Tyr Gly His Ser Ser
65                               70                      75                      80
Glu Val Lys Ala Asn Ala Arg Arg Leu Gln Ala Leu Phe Phe Gln Arg
                85                      90                      95
Met Ala Asp Ser Phe Pro Asp Asp Asn Phe Ser Ser Phe Lys Thr Arg
                100                     105                     110
Ser Leu Val Ala Leu Gly Gln Ser Ala Asn
                115                     120

```

<210> 1001
 <211> 115
 <212> PRT
 <213> Pinus radiata

<400> 1001

```

Leu Val Asn Ser Gly Met Ala Phe Gly Ala Lys Arg Trp Ile Ala Thr
 1                               5                               10                      15
Leu Gln Arg Gln Cys Glu Arg Leu Ala Ser Val Leu Ala Ser Asn Ile
                20                      25                      30
Pro Ser Arg Asp Leu Gly Val Ile Pro Ser Pro Glu Gly Arg Lys Ser
 35                               40                      45
Ile Leu Lys Leu Ala Glu Arg Met Val Thr Ser Phe Cys Ala Gly Val
 50                               55                      60
Ser Ala Ser Thr Ala His Thr Trp Thr Thr Leu Ser Gly Ser Gly Ala
65                               70                      75                      80
Glu Asp Val Arg Val Met Thr Arg Lys Ser Val Asp Asp Pro Gly Arg
                85                      90                      95
Pro Pro Gly Ile Ile Leu Ser Ala Ala Thr Ser Leu Trp Leu Pro Val
                100                     105                     110
Pro Pro Lys
                115

```

<210> 1002
 <211> 130
 <212> PRT
 <213> Pinus radiata

<400> 1002

```

Leu Glu Ser Gln Phe Asp Gln Ser Phe Glu Tyr Pro Pro Val Glu Gln
 1                               5                               10                      15
Leu Val Lys Gln Cys Gly Lys Phe Gly Leu Leu Glu Arg Leu Leu Lys
                20                      25                      30
His Leu Lys Ala Gln Lys His Lys Met Leu Ile Phe Ser Gln Trp Thr
 35                               40                      45
Lys Val Leu Asp Leu Leu Glu Tyr Tyr Leu Ser Glu Arg Gly Tyr Glu

```

```

      50              55              60
Val Cys Arg Ile Asp Gly Ser Val Lys Leu Glu Asp Arg Lys Asn Gln
65              70              75              80
Ile Arg Asp Phe Asn Asp Pro Asp Ser Asn Phe Cys Ile Phe Leu Leu
      85              90              95
Ser Thr Arg Ala Gly Gly Leu Gly Ile Asn Leu Thr Asp Ala Asp Thr
      100              105              110
Cys Phe Ile Tyr Asp Ser Asp Trp Asn Pro Gln Met Asp Met Gln Ala
      115              120              125
Met Asp
      130

```

<210> 1003

<211> 276

<212> PRT

<213> Pinus radiata

```

      <400> 1003
Val Lys Leu Gly Thr Thr Asn Thr Trp Leu Ser Arg Ala Val Ser Gly
1              5              10              15
Gln His Arg Ala Gln Gln Gln Gln Gln His Tyr Ala Glu Arg Ser
      20              25              30
Val Glu Glu Gly Arg Lys Trp Cys Gly Cys Ala Ala Gly Ser Arg Asp
      35              40              45
Cys Ile His Ser Asn Phe Leu Lys Leu Gln Asn Pro Ala Ser Ala Gly
      50              55              60
Ser Ser Ser Ala Ala Ala Asn Ala Leu Ser Gly Arg Trp Leu Met Pro
65              70              75              80
Gly Pro Leu Leu Asn Asp Lys Ile Glu Gly Arg Glu Gly Val Glu Leu
      85              90              95
Leu Gly Gly Glu Ile Pro Gly Glu Ser Ile Met Ala Leu Ser Ala Gln
      100              105              110
Phe Lys Thr Ala Gly Ser Ala Ala Pro Glu Arg Gly Leu Leu Asn Leu
      115              120              125
His Ser Ala Asp Ala Val Asn Ser Asn Gly Glu Pro Val Asp Ser Gly
      130              135              140
Gly Ala Gly Gly Asp Arg Asp Gly Gly Glu Glu Ala Glu Asp His Ala
145              150              155              160
Ala Leu Trp Gln Ser Ala Arg Ile Lys Ala Asp Ile Val Ser His Pro
      165              170              175
Leu Tyr Asp Gln Leu Leu Ser Ala His Leu Glu Cys Leu Arg Ile Ala
      180              185              190
Thr Pro Lys Asp Gln His Ser Met Ile Asp Ala Gln Leu Glu Gln Ser
      195              200              205
Gln His Val Val Thr Lys Tyr Ser Val Leu Gly Asn Asp Asn Phe Leu
      210              215              220
Val Gly Asp Lys Lys Glu Leu Asp Gln Phe Met Thr Gln Tyr Val Leu
225              230              235              240
Leu Leu Cys Ser Phe Lys Glu Gln Leu Gln Tyr His Val His Val His
      245              250              255
Val Met Glu Ala Val Arg Ala Cys Ile Asp Leu Gln His Ser Leu Leu
      260              265              270
Thr Leu Thr Gly
      275

```

<210> 1004

<211> 123

<212> PRT

<213> Pinus radiata

<400> 1004

```

Ser Cys Ala Val Gln Ser Gln Pro Ala Ala Ser Gly Thr Arg Trp Asn
1          5          10          15
Pro Thr Pro Asp Gln Ile Arg Ile Leu Glu Met Phe Tyr Lys Gly Gly
20
Met Arg Thr Pro Asn Ala Glu Gln Ile Glu His Ile Thr Ala Gln Leu
35          40          45
Arg Gln Tyr Gly Lys Ile Glu Gly Lys Asn Val Phe Tyr Trp Phe Gln
50          55          60
Asn His Lys Ala Arg Glu Arg Gln Lys Gln Lys Arg Asn Ser Ser Met
65          70          75          80
His Gln Val Ala Ala Thr Ala Ala Lys Lys Thr Pro Thr Thr Ile Met
85          90          95
Ala Asp Asn Pro Asn Glu Leu His Lys Pro Asn Ser Asn Gly Thr Tyr
100          105          110
Ser Leu Tyr Asn Leu Pro Phe Thr Ala Met Ser
115          120

```

<210> 1005
 <211> 90
 <212> PRT
 <213> Pinus radiata

```

<400> 1005
Met Gly Lys Thr Lys Met Glu Ile Lys Arg Ile Gln Asn Pro Ser Arg
1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Lys Asn Gly Leu Leu Lys Lys Ala
20          25          30
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
35          40          45
Ser Glu Thr Gly Lys Ile Cys Glu Phe Ala Ser His Asp Asp Met Ala
50          55          60
Thr Ile Leu Glu Lys Tyr Arg Ile Tyr Thr Glu Thr Asp Gly Asn Met
65          70          75          80
Glu Ser Ser Ser Val Gln Ser Val Lys Val
85          90

```

<210> 1006
 <211> 123
 <212> PRT
 <213> Pinus radiata

```

<400> 1006
Met Ser Val Phe Glu Thr Gly Asn Glu Arg Lys Arg Pro Ala Gly Asn
1          5          10          15
Ser Tyr Ser Ala Leu Glu Leu Ser Asp Asp Ile Gly Asp Glu Asp Gly
20          25          30
Ser Asp Asp Cys Ile His Leu Gly Glu Lys Lys Arg Arg Leu Thr Leu
35          40          45
Glu Gln Val Arg Ala Leu Glu Lys Asn Phe Glu Met Ala Asn Lys Leu
50          55          60
Glu Pro Glu Lys Lys Met Gln Leu Ala Lys Ala Leu Gly Leu Gln Pro
65          70          75          80
Arg Gln Ile Ala Val Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr
85          90          95
Lys Gln Leu Glu Lys Asp Phe Asn Ile Leu Lys His Asp Tyr Asp Ser
100          105          110
Leu Lys Gln Asn Tyr Asp Asn Leu Met Glu Glu
115          120

```

<210> 1007
 <211> 114

<212> PRT

<213> Pinus radiata

<400> 1007

```

Met Gly Lys Thr Lys Met Glu Met Lys His Ile Gln Asn Pro Ser Arg
1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Lys Asn Gly Leu Leu Lys Lys Ala
20          25          30
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
35          40          45
Ser Glu Thr Gly Lys Ile Ser Glu Phe Ala Ser His Asn Asp Met Ala
50          55          60
Thr Ile Leu Glu Lys Tyr Arg Ile Tyr Thr Gln Thr Glu Thr Asp Gly
65          70          75          80
Asn Met Gly Ala Ser Ser Val Gln Ser Val Lys Val Gly Glu Ser Gln
85          90          95
Leu Lys Ala Leu His Glu Arg Met Asp Asn Leu Lys Lys Lys Glu Arg
100          105          110
Asn Met

```

<210> 1008

<211> 90

<212> PRT

<213> Pinus radiata

<400> 1008

```

Met Ala Ser Asn Gly Ile Met Phe Asn Ala Ser Asn Arg Asn Leu Ile
1          5          10          15
Val Met Val Asn Glu Ala Pro Ser Phe Glu Ala Asn Ser Ser Leu Asp
20          25          30
Gly Val Met Lys Asn Val Ser Lys Arg Pro Phe Tyr Asn Thr Leu Asp
35          40          45
Ala Asp Glu Ala Gly Asp Glu Asp Leu Leu Asp Glu Cys Val His Gln
50          55          60
Pro Gly Lys Lys Arg Arg Leu Ser Val Glu Gln Val Arg Phe Leu Glu
65          70          75          80
Lys Ser Phe Glu Leu Asp Asn Lys Leu Glu
85          90

```

<210> 1009

<211> 107

<212> PRT

<213> Pinus radiata

<400> 1009

```

Leu Glu Arg Ser Ile Arg Gln Gln Arg Ala Phe His His Leu Gly Leu
1          5          10          15
Met Glu Gln His Pro Trp Arg Pro Gln Arg Gly Leu Pro Glu Arg Ser
20          25          30
Val Ser Val Leu Arg Ala Trp Leu Phe Glu His Phe Leu His Pro Tyr
35          40          45
Pro Thr Asp Ala Asp Lys His Ile Leu Ala Lys Gln Thr Gly Leu Thr
50          55          60
Arg Ser Gln Val Ser Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp
65          70          75          80
Lys Pro Met Val Glu Glu Met Tyr Met Glu Glu Leu Lys Glu Glu Lys
85          90          95
Val Asp Gln Gly Thr His Asn Ser Glu Ala Glu
100          105

```

<210> 1010
 <211> 126
 <212> PRT
 <213> Pinus radiata

<400> 1010
 Met Asn Leu Asn Asp His Thr Tyr Asn Leu Ser Pro Met Ala Asn Ser
 1 5 10 15
 Gly Asn Pro Glu Glu Gln Ile Asp Glu Asp Ala Val Asp Asp Phe Met
 20 25 30
 Asn Tyr Gln Pro Glu Ser Lys Lys Arg Arg Leu Thr Val Glu Gln Val
 35 40 45
 Arg Ser Leu Glu Arg Ser Phe Glu Ile Glu Thr Lys Leu Glu Pro Glu
 50 55 60
 Lys Lys Ile Gln Leu Ala Gln Glu Leu Gly Leu Gln Pro Arg Gln Val
 65 70 75 80
 Ala Ile Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Leu
 85 90 95
 Glu Arg Asp Tyr Ser Val Leu Lys Ala Ser Tyr Asp Ala Leu Lys Ser
 100 105 110
 Asp Phe Glu Arg Leu Gln Gln Glu Asn Lys Asn Ile Arg Ala
 115 120 125

<210> 1011
 <211> 96
 <212> PRT
 <213> Pinus radiata

<400> 1011
 Met Phe Thr Ile Ser Thr Cys Thr Thr His Ala Gln Ser Leu Ile Tyr
 1 5 10 15
 Ser Phe Val Ala Arg Gly Thr Val Val Leu Ala Glu Tyr Thr Glu Phe
 20 25 30
 Lys Gly Asn Phe Thr Gly Ile Ala Gln Cys Leu Gln Lys Leu Pro
 35 40 45
 Ala Ser Asn Asn Lys Phe Thr Tyr Asn Cys Asp Asn His Thr Phe Asn
 50 55 60
 Tyr Leu Asp Glu Asp Gly Phe Ala Tyr Cys Val Val Ala Asp Glu Ser
 65 70 75 80
 Val Gly Arg Gln Val Pro Met Ala Phe Leu Glu Arg Val Lys Glu Asp
 85 90 95

<210> 1012
 <211> 110
 <212> PRT
 <213> Pinus radiata

<400> 1012
 Gly Cys Pro Gly Asn Ile His Asp Asp Asp Glu Glu Glu Asp Glu Glu
 1 5 10 15
 Glu Cys Ser Gly Thr Gly Gln Gln Thr Arg Lys Lys Arg Arg Leu Ser
 20 25 30
 Leu Gln Gln Val Arg Ser Leu Glu Lys Thr Phe Glu Val Glu Asn Lys
 35 40 45
 Leu Glu Pro Glu Arg Lys Leu Gln Leu Ala Gln Glu Leu Gly Leu Gln
 50 55 60
 Pro Arg Gln Val Ala Val Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys
 65 70 75 80
 Thr Lys Gln Leu Glu Arg Asp Tyr Gly Gln Leu Lys Leu Asn Phe Glu
 85 90 95
 Cys Leu Lys Ser Asn Phe Asp Ala Ile Lys Gln Glu Asn Gln

100

105

110

<210> 1013
 <211> 108
 <212> PRT
 <213> Pinus radiata

<400> 1013

```
Met Ala Gly Glu Lys Arg Lys Ile Asn Arg Ile Ala Asn Ala Ser Ala
 1          5          10          15
Arg Gln Val Thr Phe Ala Lys Arg Arg Gly Leu Phe Lys Lys Ala
          20          25          30
Gln Glu Leu Ser Ile Leu Cys Glu Ala Asp Val Ala Leu Leu Val Phe
          35          40          45
Ser Ser Thr Gly Lys Leu Tyr Gln Tyr Ser Ser Ser Ser Met Lys Met
          50          55          60
Ile Leu Asp Gln Tyr Ile Leu Tyr Ser Arg Ser Ile Gln Lys Asp Gly
65          70          75          80
Lys Pro Asn Leu Glu Glu Ser His Asp Ile Gln Lys Ile Lys Gln Gln
          85          90          95
Ile Lys Asp Ile Ser Gln Asn Leu Arg Lys Leu Arg
          100          105
```

<210> 1014
 <211> 177
 <212> PRT
 <213> Pinus radiata

<400> 1014

```
Met Gly Met Asp Met Glu Asp Cys Asn Thr Gly Leu Gly Leu Gly Met
 1          5          10          15
Ser Ile Gly Leu Gly Met Asn Leu Met Arg Glu Asp Leu Gln Ser His
          20          25          30
Arg His His Val Asn Gly Pro Pro Val Gln Leu Asp Leu Leu Pro Leu
          35          40          45
Ala Pro Val Leu Pro Ser Arg Asp Leu Pro Trp Gly Lys Thr Ser Pro
          50          55          60
Gly Thr Asp Gly Glu Arg Ser Ala Gly Glu Ser Lys Ala Thr Val Pro
65          70          75          80
Arg Arg Ile Asp Val Asn Lys Leu Pro Ala Ser Cys Tyr Tyr Asn Glu
          85          90          95
Asp Thr Gly Thr Ile Asn Val Ser Ser Pro Asn Ser Ala Leu Ser Ser
          100          105          110
Phe His Val Asp Ser Gly Gly Ala Ile Asn Ala Glu Ser Ser Cys Tyr
          115          120          125
Gly Met Ser Val Lys Arg Glu Arg Glu Ala Thr Glu Glu Leu Glu Ala
          130          135          140
Glu Arg Ala Cys Ser Arg Val Ser Asp Glu Glu Ala Asp Gln Glu Gly
145          150          155          160
Gly Thr Arg Lys Lys Leu Arg Leu Ser Lys Glu Gln Ser Ala Leu Leu
          165          170          175
Glu
```

<210> 1015
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 1015

```
Met Gly Lys Lys Leu Glu Leu Lys Arg Ile Gln Asn Pro Asn Ser Ser
```

```

      1           5           10           15
Arg Asp Ser Phe Ser Lys Cys Lys Arg Gly Leu Leu Lys Lys Ser Val
      20           25           30
Lys Leu Phe Val Leu Cys Asp Ala Glu Val Ser Leu Ile Ile Leu Ser
      35           40           45
Glu Thr Ala Lys Ile Tyr Glu Phe Ala Ser Asn Lys Ser
      50           55           60

```

<210> 1016

<211> 51

<212> PRT

<213> Pinus radiata

```

      <400> 1016
Arg Phe Gln Ala Gln Asp Phe Gln Lys Gln Gly Thr Gln Leu Arg Arg
      1           5           10           15
Lys Met Trp Phe Gln Asn Met Lys Val Lys Leu Val Val Leu Gly Ile
      20           25           30
Val Phe Val Leu Ile Leu Ile Ile Trp Leu Ser Ile Cys His Gly Phe
      35           40           45
Lys Cys His
      50

```

<210> 1017

<211> 68

<212> PRT

<213> Pinus radiata

```

      <400> 1017
Met Gly Gln Gln Ser Leu Ile Tyr Ser Phe Val Ala Arg Gly Thr Val
      1           5           10           15
Val Leu Ala Glu Tyr Thr Gln Phe Thr Gly Asn Phe Thr Thr Ile Ala
      20           25           30
Asn Gln Cys Leu Gln Lys Ile Pro Ala Ser Asn Asn Lys Phe Thr Tyr
      35           40           45
Asn Cys Asp Arg His Thr Phe Asn Tyr Leu Val Glu Asp Gly Ser His
      50           55           60
Thr Val Leu Leu
      65

```

<210> 1018

<211> 155

<212> PRT

<213> Pinus radiata

```

      <400> 1018
Met Asp Arg Glu Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
      1           5           10           15
Gly Lys Gly Thr Met Arg Arg Lys Lys Lys Thr Ile His Lys Thr Ala
      20           25           30
Thr Ala Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val
      35           40           45
Asn Asn Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp His
      50           55           60
Val Ile His Phe Ala Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn
      65           70           75           80
Thr Trp Val Val Ser Gly Ser Ser Gln Thr Lys Lys Leu Gln Asp Leu
      85           90           95
Phe Pro Gly Ile Ile Asn Gln Leu Gly Pro Glu Ser Phe Ala Asn Leu
      100          105          110
Arg Lys Ile Ala Asp Gln Phe Arg Arg Pro Glu Pro Asn Pro Ala Gln

```


[illegible]

```
<210> 1019
<211> 249
<212> PRT
<213> Pinus radiata
```

[illegible]

```
<210> 1020
<211> 82
<212> PRT
<213> Pinus radiata
```

<400> 1020																	
Ala	Ser	Phe	Gly	Leu	5	Gly	Glu	Arg	Arg	Leu	10	Leu	Thr	Gly	Pro	Glu	His
1																15	
Ser	Ile	Phe	Val	Gly	Asp	Leu	Ala	Pro	Asp	Val	Thr	Asp	Tyr	Leu	Leu		
			20					25						30			
Gln	Glu	Thr	Phe	Arg	Ser	Arg	Tyr	Thr	Ser	Val	Arg	Gly	Ala	Lys	Val		
		35					40					45					
Val	Thr	Asp	Pro	Ser	Thr	Gly	Arg	Ser	Lys	Gly	Tyr	Gly	Phe	Val	Lys		
	50					55					60						
Phe	Ala	Asp	Glu	Asn	Glu	Arg	Asn	Arg	Ala	Met	Thr	Glu	Met	Asn	Gly		
65					70				75					80			

Val Tyr

<210> 1021
 <211> 107
 <212> PRT
 <213> Pinus radiata

<400> 1021
 Arg Gln Glu Pro Ser Leu Lys Lys Gln Ile Ile Glu Thr Ser Glu Lys
 1 5 10 15
 Ala Ile Val Phe Ser Gln Trp Thr Ser Met Leu Asp Leu Leu Glu Val
 20 25 30
 Pro Leu Lys Lys Ser Cys Ile Gln Tyr Arg Arg Leu Asp Gly Thr Met
 35 40 45
 Ser Val Ile Ala Arg Asp Lys Ala Val Asn Asp Phe Lys Thr Leu Pro
 50 55 60
 Glu Val Thr Val Met Ile Met Ser Leu Lys Ala Ala Ser Leu Gly Leu
 65 70 75 80
 Asn Met Val Ala Ala Ser His Val Leu Leu Asp Leu Trp Val Glu
 85 90 95
 Ser Gln Gln Leu Lys Thr Lys Leu Leu Thr Gly
 100 105

<210> 1022
 <211> 99
 <212> PRT
 <213> Pinus radiata

<400> 1022
 Leu Gly Phe Glu Asp Tyr Val Glu Pro Leu Lys Ile Tyr Leu Asn Lys
 1 5 10 15
 Tyr Arg Glu Leu Glu Gly Glu Lys Ser Ser Met Ala Ala Pro Pro Arg
 20 25 30
 Gln Ser Asp Leu Gln Gln His His His Val Asn Gly Ser Asp Pro His
 35 40 45
 Pro Tyr Gly His Ser Pro His Gly Pro Met Ala Tyr His Val Pro Gly
 50 55 60
 Gly Ala Ser Phe Arg Ala Trp Lys Val Thr Val Ala Cys Ser Phe Cys
 65 70 75 80
 Tyr Cys Lys Glu Val Ile Glu Met Glu Met Gly His Gly Asn Gly Asp
 85 90 95
 Cys Lys Val

<210> 1023
 <211> 158
 <212> PRT
 <213> Pinus radiata

<400> 1023
 Met Glu Asn Leu Pro Asn Gln Gln Pro Asp Leu Glu Ile Ala Gln Thr
 1 5 10 15
 His Glu Asp Pro Gly Ser Arg Gln Phe Lys Gly Ile Arg Leu Arg Lys
 20 25 30
 Trp Gly Arg Trp Val Ser Glu Ile Arg Ile Pro Lys Ser Arg Glu Lys
 35 40 45
 Ile Trp Leu Gly Ser Tyr Thr Thr Pro Glu Gln Ala Ala Arg Ala Tyr
 50 55 60
 Asp Ala Ala Val Tyr Cys Leu Lys Gly Pro Asn Ala Lys Phe Asn Phe
 65 70 75 80

```

Pro Glu Thr Val His Asp Ile Pro Ser Val Thr Ser Val Ser Arg Gln
      85      90
Glu Ile Gln His Ala Ala Leu Lys Tyr Ala Leu Gly Gln Pro Pro Pro
      100      105      110
Ser Leu Gln Ser Leu Glu Gly His Ala Ala Leu Lys Tyr Ala Leu Gly
      115      120      125
Gln Pro Pro Pro Ser Leu Gln Ser Leu Glu Gly His Ala Ala Leu Lys
      130      135      140
Tyr Ala Leu Gly Gln Pro Pro Ser Leu Gln Ser Leu Gln
      145      150      155

```

<210> 1024
 <211> 197
 <212> PRT
 <213> Pinus radiata

```

<400> 1024
Met Ala Phe Thr Gly Thr Gln Gln Lys Cys Lys Ala Cys Asp Lys Thr
  1      5      10      15
Val Tyr Phe Val Asp Gln Leu Ser Ala Asp Gly Val Ser Tyr His Lys
      20      25      30
Ala Cys Phe Arg Cys Asn His Cys Lys Gly Thr Leu Lys Leu Ser Asn
      35      40      45
Tyr Ser Ser Met Glu Gly Val Leu Tyr Cys Lys Pro His Phe Asp Gln
      50      55      60
Leu Phe Arg Glu Ser Gly Asn Phe Asn Lys Asn Phe Gln Ser Gln Arg
      65      70      75      80
Ser Ser Lys Ala Ile Asp Gly Leu Ser Pro Glu Met Thr Arg Ser Pro
      85      90      95
Ser Lys Val Ser Met Met Phe Ser Gly Thr Gln Asp Lys Cys Ala Thr
      100      105      110
Cys Gly Lys Thr Ala Tyr Pro Leu Glu Lys Val Thr Val Glu Asn Leu
      115      120      125
Ser Tyr His Lys Ser Cys Phe Arg Cys Ser His Gly Gly Cys Ser Ile
      130      135      140
Ser Pro Ser Asn Tyr Ala Ala Leu Glu Gly Ile Leu Tyr Cys Lys His
      145      150      155      160
His Phe Ser Gln Leu Phe Lys Glu Lys Gly Ser Tyr Asn His Leu Ile
      165      170      175
Lys Thr Ala Ser Met Lys Arg Ala Ala Val Pro Glu Val Ala Ser
      180      185      190
Ala Val Pro Glu Ile
      195

```

<210> 1025
 <211> 232
 <212> PRT
 <213> Pinus radiata

```

<400> 1025
Lys Pro Ala Gly Thr Ser Arg Leu Pro Glu Phe Lys Ser Arg Thr Ile
  1      5      10      15
Thr Leu Pro Ser Phe Asn Ile Pro Ser Ser Asn Pro Arg Lys Leu Leu
      20      25      30
Asp Met Val Lys Pro Ser Gln Lys Gln Asn Ile His Val Asn Gly Lys
      35      40      45
Pro Glu Ser Arg Ser Leu Met Ser Arg Gln Phe Lys Gly Ile Arg Leu
      50      55      60
Arg Lys Trp Gly Lys Trp Val Ser Glu Ile Arg Met Pro Asn Cys Arg
      65      70      75      80
Ala Lys Ile Trp Leu Gly Ser Tyr Glu Ser Pro Glu Lys Ala Ala Arg

```

```

      85              90              95
Ala Tyr Asp Phe Ala Ala Tyr Cys Leu Arg Gly Ser Lys Ala Arg Phe
      100              105              110
Asn Phe Pro Asp Ser Pro Pro Glu Ile Pro Cys Ala Ser Ser Leu Ser
      115              120              125
Pro Ser Gln Ile Gln Ala Gly Ala Ala Arg Phe Ala Ala Glu Glu Phe
      130              135              140
Gln Met Pro Ser Asp Asp Asp Thr Ala Ser Ser Ser Cys Gly Ser Glu
      145              150              155              160
Ala Glu Ser Asp Leu Pro Pro Glu Ile Pro Cys Ala Ser Ser Val Ser
      165              170              175
Pro Pro Pro Ile Gln Ala Ala Ala Pro Arg Phe Ala Ala Glu Glu Phe
      180              185              190
Arg Leu Pro Ser Asp Glu Asp Thr Ala Ser Ser Ser Cys Gly Ser Val
      195              200              205
Thr Glu Ser Asn Ile Asp Ser Gln Gln Ile Ser Ala Glu Gln Gly Ser
      210              215              220
Ala Phe Trp Asp Ser Leu Phe Leu
      225              230

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<210> 1026
<211> 88
<212> PRT
<213> Pinus radiata

```

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<400> 1026
His Gln Trp His Arg Phe Cys Ser Arg Arg Leu Cys Cys Thr Ala Leu
  1              5              10              15
His Asn Thr Gln Lys Gln Cys Thr Lys Ser Ala Ala Thr Gly Lys Gly
  20              25
Gly Ile Lys Arg Ile Arg Arg Gln Gln Glu Ala Ala Pro Ser Pro Pro
  35              40              45
Glu Glu Ala Thr Leu Asn Gln Gln Thr Pro Pro Tyr Arg Gly Val Arg
  50              55              60
Arg Arg Asn Trp Gly Lys Trp Val Ser Glu Ile Arg Glu Pro Lys Lys
  65              70              75              80
Lys Thr Arg Ile Trp Leu Gly Ser
      85

```

```

<210> 1027
<211> 501
<212> PRT
<213> Pinus radiata

```

```

<400> 1027
Met Cys Gly Gly Ala Ile Ile Ser Asp Phe Ile Ile Pro Pro Ala Ser
  1              5              10              15
Arg Gly Arg Arg Val Thr Ala Arg Asp Ile Trp Pro Asp Phe Asp Lys
  20              25
Phe Ser Glu Phe Ile Asn Gly Gly Ala Val Glu Ser Phe Asp Val
  35              40              45
Ser Val Asp Val Asp Asp Asp Glu Glu Asp Ser Asp Asp Asp Glu Phe
  50              55              60
Leu Asp Phe Glu Glu Ser Tyr Gln Asn Lys Lys Lys Lys Gln Gln Gln
  65              70              75              80
Pro Ile Ser Pro Thr Lys Gly Phe Glu Leu Pro Leu Ala Arg Gly Leu
      85              90              95
Asp Gly Pro Ala Ala Lys Ser Ala Val Arg Lys Arg Lys Asn Leu Tyr
      100              105              110
Arg Gly Ile Arg Gln Arg Pro Trp Gly Lys Trp Ala Ala Glu Ile Arg
      115              120              125

```

Asp Pro Arg Lys Gly Ala Arg Val Trp Leu Gly Thr Phe Asn Thr Ala
 130 135 140
 Glu Glu Ala Ala Arg Ala Tyr Asp Ala Ala Arg Lys Ile Arg Gly
 145 150 155 160
 Lys Lys Ala Lys Val Asn Phe Val Asp Glu Pro Pro Ser Val Lys
 165 170 175
 Lys Glu Ser Asn Asn Ala Lys Gly Ser Lys Lys Gly Ser Ser Lys Lys
 180 185 190
 Ile Lys Ser Tyr Thr Thr Pro Lys Ala Asp Phe Phe Glu Gly Phe Lys
 195 200 205
 Thr Ala Asn Pro Ser Ile Ala Gln Tyr Asn Phe His Gln Lys Phe Pro
 210 215 220
 Asn Pro Ser Cys Asp Asp Leu Gly Tyr Gln Asn Pro Leu Ser Pro Leu
 225 230 235 240
 His Ala Ile Cys Asn Arg Asn Phe Ala Ala Lys Gln Ser Ser Ser Ala
 245 250 255
 Leu Pro Ala Tyr Ser Thr Glu Phe Ser Asp Phe Asp Asp Ser Glu Val
 260 265 270
 Asp Asn Leu Val Pro Gln Pro Ala Ser Phe Glu Pro Met Lys Asn Ile
 275 280 285
 Asn Lys Arg Lys Gly Tyr Asn Ser Phe Glu Ser Asp Thr Ser Ser Val
 290 295 300
 Ser Ala Asp Arg Ser His Ile Ser Trp Val Thr Glu Val Lys Thr Pro
 305 310 315 320
 Glu Ile Ser Ser Val Pro Lys Ala Glu Ala Asp Ser Asp His Tyr Asp
 325 330 335
 Phe Ala Asp Met Ser Thr Pro Val Ala Thr Ser Val Ser Ala Gly Ser
 340 345 350
 Pro Glu Val Gln Leu Pro Pro Phe Asn Asn Gly Leu Asn Lys Ser Pro
 355 360 365
 Ser Val Glu Asp Gly Val Ala Ala Glu Lys Ser Pro Lys Leu Glu Glu
 370 375 380
 Ser Ser Gln Leu Glu Ile Ser Glu Asp Leu Pro Ser Leu Glu Ser Tyr
 385 390 395 400
 Pro Trp Leu Phe Gln Met Pro Tyr Phe Glu Gly Leu Asp Gln Ser Leu
 405 410 415
 Gln Gly Val Gly Ile Gly Asp Ala Ser Phe Pro Asp Gly Glu Asn Asp
 420 425 430
 Leu Gln Leu Trp Ser Phe Asp Ala Val Pro Ile Ser Asp Ser Ala Tyr
 435 440 445
 Ile Ser Leu Glu Ser Leu Ala Cys Lys Gln Leu Val Ile Met Glu Ser
 450 455 460
 Arg Arg Leu Val Met Ala Ser Phe Cys Arg Pro Ser Ser Asn Arg Glu
 465 470 475 480
 Leu Val Ile Phe Pro Leu Phe Phe Phe Ile Gln Phe Asp Gly Ala Thr
 485 490 495
 Val Ile Ser Ala His
 500

<210> 1028

<211> 134

<212> PRT

<213> Pinus radiata

<400> 1028

Met Ala Phe Ala Gly Thr Gln Gln Lys Cys Lys Ala Cys Glu Lys Thr
 1 5 10 15
 Val Tyr Val Val Asp Gln Leu Thr Ala Asp Gly Ser Val Phe His Lys
 20 25 30
 Ala Cys Phe Arg Cys His His Cys Asn Gly Thr Leu Lys Leu Ser Asn
 35 40 45

Tyr Ser Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe Asp Gln
 50 55 60
 Leu Phe Lys Arg Thr Gly Ser Leu Asp Lys Ser Phe Glu Gly Thr Pro
 65 70 75 80
 Lys Ala Val Lys Asn Glu Lys Leu Asn Asp Gly Glu Ile Lys Thr Pro
 85 90 95
 Asn Arg Val Ser Ala Leu Phe Ser Gly Thr Gln Glu Lys Cys Leu Ala
 100 105 110
 Cys Gly Asn Thr Val Tyr Pro Ile Glu Lys Val Ser Val Glu Gly Val
 115 120 125
 Gly Tyr His Lys Ala Cys
 130

<210> 1029
 <211> 76
 <212> PRT
 <213> Pinus radiata

<400> 1029
 Met Asp Gly Ser Gln Asn Ser Gly Gly Asn Ala Val Pro Pro Phe Leu
 1 5 10 15
 Thr Lys Thr Tyr Asp Met Val Asp Asp Ser Ser Thr Asp Ser Ile Val
 20 25 30
 Ser Trp Ser Pro Gly Asn Asn Ser Phe Ile Val Trp Asn Pro Pro Glu
 35 40 45
 Phe Ala Arg Asp Leu Leu Pro Lys Tyr Phe Lys His Asn Asn Phe Ser
 50 55 60
 Ser Phe Val Arg Gln Leu Asn Thr Tyr Gly Phe Arg
 65 70 75

<210> 1030
 <211> 97
 <212> PRT
 <213> Pinus radiata

<400> 1030
 His Glu Lys Lys Ala Val Leu Trp Asn Met Asp Thr Leu Lys Ala Lys
 1 5 10 15
 Gly Ser Leu Glu Glu His Ser Phe Leu Ile Thr Asp Val Arg Phe Ser
 20 25 30
 Pro Asn Ser Thr Arg Leu Ala Thr Ser Ser Phe Asp Arg Thr Val Lys
 35 40 45
 Val Trp Asp Ala Asp Asn Pro Asn Tyr Thr Leu Arg Thr Phe Ser Gly
 50 55 60
 His Thr Gly Ser Val Met Ser Leu Asp Phe His Pro Asn Asn Glu Asp
 65 70 75 80
 Leu Ile Cys Ser Cys Asp Gly Glu Ser Glu Val Arg Tyr Trp Ser Val
 85 90 95
 Asn

<210> 1031
 <211> 117
 <212> PRT
 <213> Pinus radiata

<400> 1031
 Met Gly Tyr Leu Gln Glu Leu Glu Asp Gln Ile Ile Gly Leu Gln Asn
 1 5 10 15
 Leu Val Lys Arg Asn Glu Arg Leu Tyr Gly Ser Gly Asn Thr Pro Ser
 20 25 30

Gly Gly Val Ala Leu Pro Phe Ile Leu Val Gln Thr Arg Pro Gln Ala
 35 40 45
 Thr Val Glu Ile Glu Ile Ser Glu Asp Met Gln Leu Val His Phe Asp
 50 55 60
 Phe Asn Ser Thr Pro Phe Glu Leu His Asp Asp Ala Tyr Val Leu Lys
 65 70 75 80
 Ala Met Gly Phe Cys Glu Lys Pro Phe Thr Asp Gly Met Asp Val Thr
 85 90 95
 Gly His Asp Ser Phe Ala Asn Gly Thr Gly Phe Gly Glu Asn Asn Met
 100 105 110
 Thr Ile Thr Asn Met
 115

<210> 1032
 <211> 146
 <212> PRT
 <213> Pinus radiata

<400> 1032
 Thr Arg Val Leu Leu Ile Asp Asp His Pro Leu Phe Arg Glu Gly Leu
 1 5 10 15
 Ala Gly Ala Ile Gln Ala Glu Pro Asp Phe Glu Val Val Gly Gln Ala
 20 25 30
 Gly Thr Val Asp Glu Leu Arg Gly Leu Ala Pro Gln Ile Glu Pro Asp
 35 40 45
 Val Ala Ile Val Asp Leu Leu Met Pro Ser Val Ser Gly Ile Gly Val
 50 55 60
 Thr Arg Glu Leu Cys Glu Leu Leu Pro Arg Cys Arg Val Leu Gly Leu
 65 70 75 80
 Ser Ala Val Val Asp Ala Ala Ala Ile Ala Glu Met Leu Arg Ala Gly
 85 90 95
 Ala Ser Gly Phe Ala Leu Lys Thr Gln Pro Ala Pro Asp Ile Leu Asp
 100 105 110
 Ala Val Arg Arg Thr Val Ala Gly Glu Ser Tyr Leu Pro Pro Ser Val
 115 120 125
 Ser Arg Glu Ala Ile Asp Ala Glu Leu Ala Gly Gly Ala Pro Pro Ser
 130 135 140
 Leu Ala
 145

<210> 1033
 <211> 181
 <212> PRT
 <213> Pinus radiata

<400> 1033
 Met Ser Ile Leu Pro Lys Ser Asp Ser Ile His Ile Arg Glu Val Trp
 1 5 10 15
 Ala Asp Asn Leu Glu Glu Glu Phe Asn Leu Ile Arg Glu Ile Val Asp
 20 25 30
 Asp Tyr Pro Leu Ile Ala Met Asp Thr Glu Phe Pro Gly Ile Val Val
 35 40 45
 Arg Pro Val Gly Lys Phe Arg Thr Val Gln Glu Tyr Asn Tyr Glu Thr
 50 55 60
 Leu Arg Ser Asn Val Asp Val Leu Lys Leu Ile Gln Leu Gly Leu Thr
 65 70 75 80
 Phe Ser Asp Glu Asp Gly Asn Leu Pro Asn Cys Gly Thr Asp Arg Tyr
 85 90 95
 Cys Val Trp Gln Phe Asn Phe Arg Glu Phe Asn Ile Trp Glu Asp Ala
 100 105 110
 Tyr Ala Ser Asp Ser Ile Glu Leu Leu Arg Gln Ser Gly Ile Asp Phe

115 120 125
 Lys Lys Asn Ser Glu Arg Gly Val Asp Ser His Leu Phe Ala Glu Leu
 130 135 140
 Leu Met Ser Ser Gly Ile Val Leu Asn Glu Asn Val Arg Trp Ile Thr
 145 150 155 160
 Phe His Ser Gly Tyr Asp Phe Gly Tyr Leu Leu Lys Leu Val Met Asn
 165 170 175
 Arg Ser Leu Pro Pro
 180

<210> 1034

<211> 122

<212> PRT

<213> Pinus radiata

<400> 1034
 Glu His Ala Cys Pro Met Ala Cys His Pro Gly Pro Cys Pro Cys
 1 5 10 15
 Leu Val Ser Val Ser Lys Ser Cys Trp Cys Gly Ser Lys Thr Leu Val
 20 25 30
 Ser Arg Cys Ser Val Leu Asn Lys Gly Thr Ser Thr Asn Ala Gly Val
 35 40 45
 Gly Pro Val Leu Ser Cys Gly Gln Pro Cys Gly Arg Leu Leu Gly Cys
 50 55 60
 Glu Lys His Thr Cys Glu Gln Glu Cys His Pro Gly Pro Cys Pro Pro
 65 70 75 80
 Cys Asp Ile Val Asp Val Ala Lys Cys Tyr Cys Gly Arg Gln Glu Arg
 85 90 95
 Gly Met Ala Cys Gly Thr Gly Ile Val Glu Thr Cys Val Val Glu Gly
 100 105 110
 Glu Gly Ser Trp Glu Gly Arg Trp Gln Cys
 115 120

<210> 1035

<211> 158

<212> PRT

<213> Pinus radiata

<400> 1035
 Met Arg Ile Asn Glu Ala Thr Pro Lys Lys Ser Leu Gly Phe Gln Gln
 1 5 10 15
 Pro Tyr Ser Met Lys Gly Asn Tyr Tyr Thr Gln Ala Tyr Gly Gly Ala
 20 25 30
 Val Ala Ser Gln Ala Phe Gln Ser Asp Asn Asp Pro Asn Asn Thr Thr
 35 40 45
 Ile Phe Val Gly Gly Leu Asp Pro Asn Ala Thr Asp Glu Asp Leu Arg
 50 55 60
 Gln Val Phe Gly Pro Tyr Gly Glu Ile Val Tyr Val Lys Ile Pro Val
 65 70 75 80
 Gly Lys Gly Cys Gly Phe Val Gln Phe Thr Asn Arg Ser Ser Ala Glu
 85 90 95
 Glu Ala Leu Gln Lys Leu His Gly Thr Val Ile Gly Gln Gln Ser Ile
 100 105 110
 Arg Leu Ser Trp Gly Arg Ser Pro Ala Asn Lys Gln Thr Ala Ser Trp
 115 120 125
 Gly Val Gln Pro Gln Ala Asp Pro Asn Gln Trp Asn Gly Gly Gly Ala
 130 135 140
 Tyr Tyr Gly Tyr Gly Gln Gly Tyr Glu Ala Tyr Gly Tyr Ala
 145 150 155

<210> 1036

<211> 126
 <212> PRT
 <213> Pinus radiata

<400> 1036
 Gln Tyr Leu Ser Pro Gly Lys Ser Ala Pro Phe Trp Leu Cys Gln Asp
 1 5 10 15
 Met Ala Ile Thr Ser Gln Gln His His Met Asn Ala Leu Pro Tyr Asn
 20 25 30
 Glu Arg Ser Glu Lys Arg Pro Lys Phe Lys Gly Ile Arg Met Arg Lys
 35 40 45
 Trp Gly Ser Trp Gly Ser Glu Ile Arg Met Pro Lys Thr Arg Thr Lys
 50 55 60
 Ile Trp Leu Gly Ser Tyr Glu Thr Ala Glu Gln Ala Ala Arg Ala Tyr
 65 70 75 80
 Asp Ala Ala Leu Tyr Cys Leu Arg Gly Pro Asn Ala Lys Phe Asn Phe
 85 90 95
 Pro Asp Thr Val Pro Ser Ile Pro Ser Ala Phe Ser Leu Ser Arg His
 100 105 110
 Gln Ile Gln Leu Ala Ala Arg Tyr Ala Arg Asp Glu Leu
 115 120 125

<210> 1037
 <211> 79
 <212> PRT
 <213> Pinus radiata

<400> 1037
 Met Glu Pro Met Asp Ile Val Gly Lys Ser Lys Asp Asp Val Ser Leu
 1 5 10 15
 Pro Lys Ala Thr Met Phe Lys Ile Ile Lys Glu Met Leu Pro Pro Asp
 20 25 30
 Val Arg Val Ala Arg Asp Ala Gln Asp Leu Leu Val Glu Cys Cys Val
 35 40 45
 Glu Phe Ile Asn Leu Ile Ser Ser Glu Ser Asn Glu Val Cys Gly Arg
 50 55 60
 Glu Glu Lys Arg Thr Ile Ala Pro Glu His Val Leu Arg Ala Leu
 65 70 75

<210> 1038
 <211> 132
 <212> PRT
 <213> Pinus radiata

<400> 1038
 Glu Ile Ser Leu Phe Trp Leu Gln Ser Phe Cys Lys Leu Pro Asn Met
 1 5 10 15
 Glu Asn Val Pro Glu Gln Glu Pro Asp Asn Thr Ile Ser Leu Pro His
 20 25 30
 Glu Asp Arg Gly Ser Arg Gln Phe Lys Gly Ile Arg Leu Arg Lys Trp
 35 40 45
 Gly Ser Trp Val Ser Glu Ile Arg Met Pro Arg Ser Arg Lys Lys Ile
 50 55 60
 Trp Leu Gly Ser Tyr Thr Thr Pro Glu Gln Ala Ala Arg Ala Tyr Asp
 65 70 75 80
 Ala Ala Val Tyr Cys Leu Arg Gly Arg Asn Ala Glu Phe Asn Phe Ser
 85 90 95
 Val Pro Asp Ile Pro Thr Ala Ser Pro Leu Ser Arg Glu Gln Ile Gln
 100 105 110
 His Ala Ala Ala Glu Tyr Ala Leu Gly Lys Ala Pro Ser Ser Phe Pro
 115 120 125

Ser Phe Ala Gly
130

<210> 1039
<211> 241
<212> PRT
<213> Pinus radiata

<400> 1039
Met Asn Glu Pro Asp Glu His Ala Ala Ala Gln Leu Val Gln Lys Arg
1 5 10 15
Ser His Pro Leu Ala Glu Val Val Met Pro Ile Ser Val Arg Pro Leu
20 25 30
Ala Glu Lys Cys Gly Val Glu Ala Glu Glu Arg Lys Arg Ala Ala
35 40 45
Glu His Lys Lys Gln Arg Ser Lys Asn Trp Thr Arg Ala Glu Thr Leu
50 55 60
Lys Leu Ile Arg Leu Arg Ala Glu Met Glu Pro Arg Phe Ala Arg Ser
65 70 75 80
Gly Arg Lys Ser Glu Leu Trp Glu Glu Ile Ala Glu Ala Leu Arg Arg
85 90 95
Glu Ser Val Val Arg Asp Ala Gln Arg Cys Arg Asp Lys Trp Glu Lys
100 105 110
Leu Thr Ala Ser Tyr Lys Glu Val Arg Asp Gly Gln Arg Asp Arg Gln
115 120 125
Asp Phe Pro Phe Phe Asp Glu Leu Asp Pro Leu Leu Ser Leu Lys Pro
130 135 140
Gln Lys Ala Ala Ala Ala Ala Ala Ala Thr Ala Ala Thr Ala
145 150 155 160
Ala Asn Phe Val Ser Ala Glu Thr Pro Ser Asn Phe Pro Thr Asp Asp
165 170 175
Glu Met Thr Glu Glu Gly Ser Pro Ala Gly Lys Arg Arg Lys Thr Thr
180 185 190
Pro Arg Gly Leu Ser Ala Thr Asp Leu Asp Ala Val Arg Glu Leu Leu
195 200 205
Glu Ser Leu Val Ser Arg Gln Gln Arg Phe Phe Val Asp Leu Leu Asp
210 215 220
Ser Met Glu Arg Lys Glu Glu Ile Arg Glu Arg Ile Arg Gln Glu Lys
225 230 235 240
Glu

<210> 1040
<211> 182
<212> PRT
<213> Pinus radiata

<400> 1040
Met Val Tyr Ile Val Leu Leu Asp Leu Cys Glu Ser Val Gln Pro Pro
1 5 10 15
Gln Gly Ser Leu Gln Glu Phe Ser Asn Ser Ile Gln Glu Gln Ala
20 25 30
Met Val Asp Leu Met Pro Lys Asp Ser Arg Gln Thr Met Ile Asn Asn
35 40 45
Thr Thr Ile Phe Val Gly Arg Leu Asp Pro Asn Ala Thr Asp Glu Asp
50 55 60
Leu Arg Gln Val Phe Gly Gln Tyr Gly Asp Leu Val Ser Ile Lys Ile
65 70 75 80
Pro Val Gly Lys Gly Cys Gly Phe Val Gln Phe Ala Asn Arg Ala Cys
85 90 95
Ala Glu Glu Ala Leu Gln Arg Leu His Gly Thr Val Ile Arg Gln Gln

```

100              105              110
Thr Ile Arg Leu Ser Trp Gly Arg Ser Pro Ala Asn Lys Gln Asn Ser
115
Gln Pro Gln Gly Gln Gln Pro Gln Ser Asp Pro Asn Gln Trp Asn Gly
130              135              140
Ala Tyr Tyr Gly Gln Gly Tyr Glu Ser Tyr Gly Tyr Ala Pro Pro Pro
145              150              155              160
Gln Asp Pro Ala Met Tyr Ala Tyr Gly Gly Tyr Pro Gly Tyr Gly Asn
165              170              175
Tyr Asn Gln Gln Val Ser
180

```

<210> 1041

<211> 66

<212> PRT

<213> Pinus radiata

<400> 1041

```

Thr Ser Tyr His Arg Pro Cys Phe Lys Cys Cys His Gly Gly Cys Val
1              5              10              15
Ile Ser Pro Ser Asn Tyr Val Ala His Glu Gly Arg Leu Tyr Cys Arg
20              25              30
His His Ser Ser Gln Leu Phe Arg Glu Lys Gly Asn Phe Ser Gln Leu
35              40              45
Ser Lys Ala Thr Pro Thr Lys Gly Val Thr Glu Asn Ser Asp Thr Asp
50              55              60
Asp Lys
65

```

<210> 1042

<211> 152

<212> PRT

<213> Pinus radiata

<400> 1042

```

Val Gly Gly Gly Gly Lys Gly Ser Pro Tyr Arg Gly Val Arg
1              5              10              15
Met Arg Lys Trp Gly Lys Trp Val Ser Glu Val Arg Glu Pro Asn Lys
20              25              30
Arg Ser Arg Ile Trp Leu Gly Ser Tyr Ser Thr Pro Glu Ala Ala Ala
35              40              45
Arg Ala Tyr Asp Thr Ala Val Phe Tyr Leu Arg Gly Pro Ser Ala Thr
50              55              60
Leu Asn Phe Pro Glu Glu Ala Arg Lys Glu Gln Gln Ser Asp Leu Arg
65              70              75              80
Leu Ser Gln Leu Gly Glu Leu Ser Pro Ser Ser Ile Gln Arg Arg Ala
85              90              95
Ala Glu Val Gly Ala Ala Val Asp His Ala Met Gln Ala Gly Pro Val
100              105              110
Pro Ala Gln Thr Leu Arg Glu Ile Asn Gln Glu Asn Asp Met Lys Asn
115              120              125
Ala Leu Ser Ser Lys Leu Ser Glu Gly Asn Asn Phe Lys Ile Glu Ala
130              135              140
Lys Asn Asn Met Arg Gln Gln Gly
145              150

```

<210> 1043

<211> 193

<212> PRT

<213> Pinus radiata

<400> 1043
 Met Ala Phe Ala Gly Thr Thr Gln Lys Cys Lys Ala Cys Glu Lys Thr
 1 5 10 15
 Val Tyr Leu Val Asp Gln Leu Thr Ala Asp Asn Ser Val Phe His Lys
 20 25 30
 Ser Cys Phe Arg Cys His His Cys Asn Gly Thr Leu Lys Leu Ser Asn
 35 40 45
 Tyr Ser Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe Asp Gln
 50 55 60
 Leu Phe Lys Arg Thr Gly Ser Leu Asp Lys Ser Phe Glu Ala Ile Pro
 65 70 75 80
 Arg Ala Ser Arg Asn Asp Lys Met His Glu Asn Glu Asn Arg Thr Pro
 85 90 95
 Ser Arg Val Ser Ala Leu Phe Ser Gly Thr Gln Asp Lys Cys Val Ala
 100 105 110
 Cys Gly Lys Thr Val Tyr Pro Ile Glu Lys Val Ala Val Asp Gly Thr
 115 120 125
 Ser Tyr His Arg Pro Cys Phe Lys Cys Cys His Gly Gly Cys Val Ile
 130 135 140
 Ser Pro Ser Asn Tyr Val Ala His Glu Gly Arg Leu Tyr Cys Arg His
 145 150 155 160
 His Ser Ser Gln Leu Phe Arg Glu Lys Gly Asn Phe Ser Gln Leu Ser
 165 170 175
 Lys Ala Thr Pro Thr Lys Gly Val Thr Glu Asn Ser Asp Thr Asp Asp
 180 185 190
 Lys

<210> 1044
 <211> 121
 <212> PRT
 <213> Pinus radiata

<400> 1044
 Met Val Lys Pro Leu Pro Lys Gln Ser Ser Pro Ser Gly Ser Glu Asn
 1 5 10 15
 Cys Gln Ile Lys Ser Arg Gln Phe Lys Gly Ile Arg Leu Arg Lys Trp
 20 25 30
 Gly Lys Trp Val Ser Glu Ile Arg Met Pro Asn Ser Arg Ala Lys Ile
 35 40 45
 Trp Leu Gly Ser Tyr Asp Ser Pro Glu Lys Ala Ala Arg Ala Tyr Asp
 50 55 60
 Phe Ala Leu Tyr Cys Leu Arg Gly Ser Lys Ala Thr Phe Asn Phe Pro
 65 70 75 80
 Asp Ser Pro Pro Glu Ile Pro Cys Ala Ser Asp Leu Ser Pro Pro Gln
 85 90 95
 Ile Gln Ala Ala Ala Ala Arg Phe Ala Thr Glu Asp Phe Arg Leu Pro
 100 105 110
 Ser Glu Glu Asp Ala Ala Ser Ser Ser
 115 120

<210> 1045
 <211> 131
 <212> PRT
 <213> Pinus radiata

<400> 1045
 Met Glu Ile Arg Leu Gln Gln Glu Asn Asp Gln Asp Ile Ala Pro Pro
 1 5 10 15
 His Glu Asp Arg Val Ser Arg Gln Phe Lys Gly Val Arg Pro Arg Lys
 20 25 30

```

Trp Gly Ile Trp Val Ser Glu Ile Arg Met Pro Arg Ser Arg Gln Lys
      35      40      45
Ile Trp Leu Gly Ser Tyr Lys Lys Pro Glu Gln Ala Ala Arg Ala Tyr
      50      55      60
Asp Ala Ala Val Tyr Cys Leu Arg Gly Ser Asn Ala Lys Phe Asn Phe
      65      70      75      80
Pro Asn Ser Val Pro Asp Ile Pro Ser Ala Ser Ser Leu Ser Arg Gln
      85      90      95
Gln Ile Gln Leu Ala Ala Ala Lys Tyr Ala Leu Asp Gln Ser Pro Ser
      100      105      110
Ser Pro Pro Ser Leu Asn Asn Asn Lys Glu Glu Pro Ala Ser Pro Ser
      115      120      125
Gln Ser Ser
      130

```

<210> 1046
 <211> 102
 <212> PRT
 <213> Pinus radiata

```

<400> 1046
Met Thr Gln Gln Thr Thr Ser Pro Thr Val Ser Pro Ala Ala Leu Ala
  1      5      10      15
Leu Pro Thr Ser Ala Ser Ser Thr Ser Ala Lys Ser Ala Ala Val Pro
      20      25      30
Val Pro Ala Gln Ala Asn Pro Arg Lys Arg Pro Arg Ser Asp Leu Ser
      35      40      45
Ala Glu Glu Lys Arg Glu Ala Arg Ala His Arg Asn Arg Ile Ala Ala
      50      55      60
Gln Asn Ser Arg Asp Lys Arg Lys Gln Gln Phe Thr Ser Leu Glu Gln
      65      70      75      80
Arg Val Ile Asp Leu Glu Asn Glu Asn Arg Gln Leu Arg Asp Ala Leu
      85      90      95
Ala Thr Ser Gln Pro Asn
      100

```

<210> 1047
 <211> 66
 <212> PRT
 <213> Pinus radiata

```

<400> 1047
Leu Leu Thr Ile Phe Glu Ala Val Tyr Val His Lys Gly Ile Val Asn
  1      5      10      15
Ala Ala Lys Val Leu Asn Leu Thr Pro Ser Ala Ile Ser Gln Ser Ile
      20      25      30
Gln Lys Leu Arg Val Ile Phe Pro Asp Pro Leu Phe Ile Arg Lys Gly
      35      40      45
Gln Gly Val Thr Pro Thr Ala Phe Ala Met His Leu His Glu Tyr Ile
      50      55      60
Ser Gln
      65

```

<210> 1048
 <211> 106
 <212> PRT
 <213> Pinus radiata

```

<400> 1048
Met Lys Gly Pro Gln Gly Ile Ser Asn Ala Gln Asn Thr Cys Thr Lys
  1      5      10      15

```

```

Phe Arg Met Pro Thr Ser Glu Asn Leu Ile Pro Ile Arg Leu Asp Ile
      20      25      30
Glu Ile Asp Gly Leu Arg Leu Lys Asp Ala Phe Thr Trp Asn Val Asn
      35      40      45
Asp Pro Asp Ser Glu Ile His Leu Phe Ala Arg Arg Thr Ile Lys Asp
      50      55      60
Leu Lys Tyr Pro Gly Ser Phe Ile Thr Pro Val Gln Ser Ile Gln
      65      70      75      80
Ala Gln Leu Ala Glu Phe Arg Ser Phe Glu Gly Gln Glu Met Asn Thr
      85      90      95
Gly Gln Lys Val Leu Pro Leu Lys Leu Pro
      100      105

```

<210> 1049
 <211> 134
 <212> PRT
 <213> Pinus radiata

```

<400> 1049
Met Glu Gly Ser Gln Asn Gly Ser Ser Asn Ala Pro Pro Pro Phe Leu
  1      5      10      15
Thr Lys Thr Tyr Asp Met Val Asp Asp Pro Ala Thr Asn Ala Met Val
      20      25      30
Ser Trp Ser Pro Gly Ser Asn Ser Phe Ile Val Trp Asn Pro Thr Glu
      35      40      45
Phe Ser Arg Val Leu Leu Pro Thr Tyr Phe Lys His Ser Asn Phe Ser
      50      55      60
Ser Phe Val Arg Gln Leu Asn Thr Tyr Gly Phe His Lys Ile Asp Pro
      65      70      75      80
Glu Arg Trp Glu Phe Ala Asn Glu Gly Phe Leu Arg Gly His Arg His
      85      90      95
Leu Leu Lys Asn Ile His Arg Arg Lys Pro Val His Ser His Ser Gln
      100      105      110
Gln Lys Gly Glu Ser Leu Ser Gly Ser Cys Val Glu Ile Lys Gln
      115      120      125
Leu Glu Asp Glu Thr Glu
      130

```

<210> 1050
 <211> 220
 <212> PRT
 <213> Pinus radiata

```

<400> 1050
Met Val Leu Tyr Glu Leu Leu His Val Gln Gln Ile Gln Gln Ile Gln
  1      5      10      15
Gln Gln Gln Phe Gln Leu Gln Gln Gln Gln Ile Ala Ala Ala Ser
      20      25      30
Ile His His Met Gly Arg Asn Pro Leu Gly Pro Arg Asp Gln Pro Met
      35      40      45
Lys Leu His Gly Ser Ser Leu Ser Lys Pro Ala Lys Leu Tyr Arg Gly
      50      55      60
Val Arg Gln Arg His Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro
      65      70      75      80
Arg Asn Arg Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Glu
      85      90      95
Ala Ala Met Ala Tyr Asp Lys Ala Ala Tyr Arg Leu Arg Gly Asp Tyr
      100      105      110
Ala Arg Leu Asn Phe Pro His Leu Lys His His Leu Glu Ala Asn Ser
      115      120      125
Phe Ala Pro Trp Thr Gly Asn Ser Val Leu Pro Ser Ser Val Asp Ala

```

```

130              135              140
Lys Leu Gln Ala Ile Cys Gln Ser Leu Lys Gln Pro Leu Glu Ser Met
145              150              155              160
Ser Lys Thr Glu Glu Ser Glu Glu Ile Ser Cys Ala Tyr Glu Asn Ser
              165              170              175
Gly Ser Leu Gly Ser Val Arg Asp Glu Asp Ala Lys Lys Asn Asp Val
              180              185              190
Val Ser Val Lys Ser Glu Thr Cys Asp Ser Asp Ser Ser Asp Asp Ser
              195              200              205
Thr Ile Thr Ala Leu Asn Ser Ser Gly Asp Gln Asn
210              215              220

```

<210> 1051

<211> 219

<212> PRT

<213> Pinus radiata

```

<400> 1051
Arg Ile Glu Ala Pro Gly Arg Arg Thr Asn Pro Ala Ala Val Thr Trp
1      5      10      15
Ala Ala Ala His Phe Ser Val Lys Glu Gln Asp Arg Phe Leu Pro Ile
20      25      30
Ala Asn Val Gly Arg Ile Met Lys Lys Ala Leu Pro Ala Asn Gly Lys
35      40      45
Val Ser Lys Asp Ala Lys Glu Thr Val Gln Glu Cys Val Ser Glu Phe
50      55      60
Ile Ser Phe Ile Thr Gly Glu Ala Ser Asp Lys Cys Gln Arg Glu Lys
65      70      75
Arg Lys Thr Ile Asn Gly Asp Asp Leu Leu Trp Ala Met Thr Thr Leu
85      90      95
Gly Phe Glu Asp Tyr Val Glu Pro Leu Lys Ile Tyr Leu His Lys Tyr
100      105      110
Arg Glu Met Glu Gly Glu Lys Val Ser Met Ala Lys Gln Gly Asp Pro
115      120      125
Thr Pro Ser Lys Glu Gly Asn Asn Ala Ile Asn Gly Ser Ser Ile Glu
130      135      140
Asn Pro Asn Ala Asn Ala Tyr Ser Gly Leu Asn Pro Gly Gly Tyr Asn
145      150      155      160
Arg Val Gln Ser Gln Ser Leu Pro His Met Gln Gln Ala Ala Tyr Gly
165      170      175
Gln Pro Pro Gly Gly Met Val Tyr Gly His His Gly His Ile Met Gly
180      185      190
Ala Tyr Asn Met Thr Ala Pro Asn Ser Ser Gly Gly Asn Ser Ser Gly
195      200      205
Gln Gln Gln Gln Ala Pro Arg Gly Gln Trp
210      215

```

<210> 1052

<211> 100

<212> PRT

<213> Pinus radiata

```

<400> 1052
Gly Cys Thr Thr Val Val Glu Thr Leu Ala Lys Trp Gln Glu Leu Asn
1      5      10      15
Ser Gln Val Glu Ser Ser Lys Asp Gly Ala Lys Arg Leu Arg Lys Ala
20      25      30
Pro Ala Lys Gly Ser Lys Lys Gly Cys Met Lys Gly Lys Gly Gly Pro
35      40      45
Asp Asn Gly Arg Cys Asn Tyr Arg Gly Val Arg Gln Arg Thr Trp Gly
50      55      60

```

Lys Trp Val Ala Glu Ile Arg Glu Pro Asn Arg Gly Ser Arg Leu Trp
 65 70 75 80
 Leu Gly Thr Phe Ser Ser Ala Glu Glu Ala Arg Ala Tyr Asp Gln
 85 90 95
 Ala Ala Arg Val
 100

<210> 1053
 <211> 117
 <212> PRT
 <213> Pinus radiata

<400> 1053
 Met Glu Ile Val Gly Lys Ala Lys Glu Asp Val Ser Leu Pro Lys Ala
 1 5 10 15
 Thr Met Thr Lys Ile Ile Lys Glu Met Leu Pro Ala His Val Arg Val
 20 25 30
 Thr Arg Asp Ala Gln Asp Leu Leu Val Glu Cys Cys Val Glu Phe Ile
 35 40 45
 Asn Leu Ile Ser Ser Glu Ser Asn Asp Ile Cys Tyr Lys Glu Glu Lys
 50 55 60
 Arg Thr Ile Ala Pro Glu His Val Leu Glu Ser Leu Lys Ile Leu Gly
 65 70 75 80
 Phe Gly Ser Tyr Ile Arg Glu Val Lys Ala Ala Tyr Glu Gln His Arg
 85 90 95
 Ile Glu Asn Trp Asp Cys Pro Arg Ala Gly Thr Arg Trp Ser Lys Asn
 100 105 110
 Arg Leu Glu Met Thr
 115

<210> 1054
 <211> 161
 <212> PRT
 <213> Pinus radiata

<400> 1054
 Asn Ile Asn Gly Val Ala Gly Gly Val Ala Lys Glu Lys Lys Val Asn
 1 5 10 15
 Phe Pro Trp Cys Ala Leu Glu Lys Gln Val Gly Thr Ser Ser Phe Asp
 20 25 30
 Pro Asn Leu Ala Ser Ser Lys Gln Ala Met Asp Ser Leu Ile Met Gln
 35 40 45
 Gln Leu Pro Thr Phe Leu Gln Tyr Cys Lys Asp Leu Glu Glu Gly Arg
 50 55 60
 Gln Ser Trp Phe Met His Lys Lys Glu Ala Thr Trp Arg Leu Ser Arg
 65 70 75 80
 Leu Glu Gln Gln Leu Glu Ser Glu Lys Ala Arg Lys Arg Arg Glu Lys
 85 90 95
 Ile Glu Glu Val Gly Ser Lys Ile Arg Ala Leu Arg Glu Glu Glu Ile
 100 105 110
 Thr Tyr Leu Asp Lys Leu Glu Thr Glu Cys Arg Glu Gln Leu Ser Ser
 115 120 125
 Leu Gln Arg Asp Ala Glu Met Lys Glu Ala Lys Met Met Glu Leu Trp
 130 135 140
 Ala Thr Lys His Leu Gln Leu Thr Lys Phe Val Asp Ser Ala Leu Ser
 145 150 155 160
 Val

<210> 1055
 <211> 396

<212> PRT

<213> Pinus radiata

<400> 1055

```

Met Ala Arg Glu Thr Asn Ser Phe Ala Leu Leu Gly Gly Asp Asp Asp
 1          5          10          15
Gln Gly Asp Asp Asp Leu Met Ala Leu Ile Asn Ser Ala Ala Thr Leu
 20          25          30
Lys Pro Glu Lys Lys Pro Lys Thr Thr Ala Lys Lys Asn Gly Gln Gln
 35          40          45
Gln Pro Pro Pro Pro Gln Ser Gln Pro Ala Lys Leu Pro Ser Lys Pro
 50          55          60
Leu Pro Pro Ala Glu Ala Val Arg Ala Asp Arg Gly Arg Gly Arg Gly
 65          70          75          80
Gly Arg Gly Arg Gly Gly Gly Arg Gly Ser Arg Phe Glu Gly Gly Glu
 85          90          95
Tyr Asn Thr Glu Ser Asn Gly Tyr Gly Gly Gly Gly Gly Phe Gly Gly
100          105          110
Gly Arg Gly Trp Gly Arg Asp Glu Asp Ser Gly Asn Arg Gly Trp Gly
115          120          125
Arg Glu Glu Asp Thr Gly Gly Arg Gly Trp Gly Arg Ser Asn Gly Glu
130          135          140
Glu Asp Thr Gly Gly Arg Gly Trp Ser Arg Ser Asn Gly Glu Asp Asp
145          150          155          160
Ala Ala Ala Gly Gly Gln Ser Arg Gly Arg Gly Arg Gly Arg Gly
165          170          175          180
Arg Gly Arg Gly Phe Gly Gly Arg Gly Ser Gly Arg Phe Gly Gly Gly
185          190          195
Gly Asp Ser Tyr Gly Tyr Asp Ala Asn Gly Gln Asp Arg Pro Pro Arg
200          205          210
Gln Gln Phe Glu Asp Thr Asn Thr Phe Thr Gly Thr Asp Asn Trp Asp
215          220          225
Thr Pro Glu Val Ser Val Val Asp Glu Ala Lys Asn Val Glu Pro Glu
230          235          240
Gln Lys Lys Pro Glu Glu Glu Ala Thr Pro Gly Val Thr Ser Glu Asn
245          250          255
Lys Asp Asn Lys Glu Glu Glu Asp Asn Glu Met Thr Leu Asp Glu Tyr
260          265          270          275
Glu Lys Leu Leu Asn Glu Lys Arg Lys Thr Leu Glu Ala Leu Lys Asn
280          285          290
Ala Glu Arg Lys Val Ile Leu Asp Arg Asp Phe Glu Lys Met Gln Leu
295          300          305
Val Asp Lys Lys Asn Asp Gly Ile Phe Ile Lys Leu Asn Ser Glu Lys
310          315          320
Glu Arg Gln Arg Lys Lys Glu Thr Leu Glu Lys Glu Glu Arg Ala Arg
325          330          335
Lys Ser Val Ser Ile Asn Glu Phe Leu Lys Pro Ala Asp Gly Glu Arg
340          345          350
Tyr Phe Thr Pro Ser Gly Thr Arg Gly Arg Gly Arg Gly Arg Gly Arg
355          360          365
Gly Arg Gly Asp Gly Val Ser Thr Arg Gly Gly Phe Gly Gly Arg Tyr
370          375          380
Ser Asp Ala Asp Gln Val Ala Ala Pro Cys Ile Glu
385          390          395

```

<210> 1056

<211> 120

<212> PRT

<213> Pinus radiata

<400> 1056

```

Thr Trp Ala Gln Glu Glu Glu Lys Ser Pro Arg Ala Ile Gly Gly Glu
 1          5          10          15
Lys Gly Gly Arg Gly Leu Arg Gln Phe Ser Met Lys Val Cys Gln Lys
 20          25          30
Val Glu Ser Lys Gly Arg Thr Thr Tyr Asn Glu Val Ala Asp Glu Leu
 35          40          45
Val Ala Glu Tyr Ala Asn Pro Asn Ser Ala Leu Ile Ser Pro Asp Gln
 50          55          60
Gln Gln Tyr Asp Glu Lys Asn Ile Arg Arg Arg Val Tyr Asp Ala Leu
 65          70          75
Asn Val Leu Met Ala Met Asp Ile Ile Ser Lys Asp Lys Lys Glu Ile
 85          90          95
Gln Trp Lys Gly Leu Pro Ser Thr Ser Pro Asn Asp Leu Glu Asp Leu
100          105          110
Lys Ala Lys Arg Met Gly Leu Arg
115          120

```

<210> 1057

<211> 78

<212> PRT

<213> Pinus radiata

<400> 1057

```

Pro Met Lys Leu Tyr Arg Gly Val Arg Gln Arg His Trp Gly Lys Trp
 1          5          10          15
Val Ala Glu Ile Arg Leu Pro Arg Asn Arg Thr Arg Leu Trp Leu Gly
 20          25          30
Thr Phe Asp Thr Ala Glu Asp Ala Ala Leu Ala Tyr Asp His Glu Ala
 35          40          45
Tyr Lys Leu Arg Gly Glu Asn Ala Arg Leu Asn Phe Pro His Leu Phe
 50          55          60
Leu Asn Lys Gly Ser Thr Ser Pro Lys Ala Cys Ser Val Ala
 65          70          75

```

<210> 1058

<211> 171

<212> PRT

<213> Pinus radiata

<400> 1058

```

Ser Phe Ser Cys Arg Ile Arg His Gln Thr Glu Pro Thr Leu Ile Leu
 1          5          10          15
Ile Asp Thr Ala Gly Cys Asp Met Glu Glu Lys Lys Asp Asp Glu Asp
 20          25          30
Ser Thr Met Asn Glu Gly Glu Ala Thr Val Thr Leu Met His Ala Lys
 35          40          45
Lys Leu Leu Glu Ser Gly Val Asn Pro Ser Asp Ile Gly Ile Ile Thr
 50          55          60
Pro Tyr Ala Ala Gln Val Gly Leu Leu Lys Ile Met Arg Ser Lys Glu
 65          70          75
Met Lys Leu Lys Asp Leu Glu Ile Ser Thr Val Asp Gly Phe Gln Gly
 85          90          95
Arg Glu Lys Glu Ala Ile Val Ile Ser Met Val Arg Ser Asn Ala Lys
100          105          110
His Glu Val Gly Phe Leu Asn Asp Arg Arg Arg Met Asn Val Ala Val
115          120          125
Thr Arg Ala Arg Arg Gln Cys Cys Ile Ile Cys Asp Thr Glu Thr Val
130          135          140
Ser Ser Asp Lys Phe Leu Lys Arg Leu Val Glu Tyr Phe Glu Glu His
145          150          155          160
Ala Glu Tyr Leu Ser Ala Ser Glu Tyr Leu Thr

```

165

170

<210> 1059
 <211> 94
 <212> PRT
 <213> Pinus radiata

<400> 1059
 Glu Lys Cys Ser Asp Gln Val Ser Gly Ser Thr Ser Ser Cys Arg Ile
 1 5 10 15
 Arg His Glu Leu Gly Tyr Ser Arg Ser Ala Lys Arg Cys Lys Glu Lys
 20 25 30
 Trp Glu Asn Ile Asn Lys Tyr Phe Arg Lys Ala Lys Glu Ser Asn Lys
 35 40 45
 Lys Arg Pro Glu Asn Ala Lys Thr Cys Pro Tyr Phe His Gln Leu Asp
 50 55 60
 Ala Leu Tyr Lys Lys Arg Asn Leu Gly Asn Arg His Asn Lys Ile Met
 65 70 75 80
 Val Leu Ser Ile Phe Ser Val Ala Ser Thr Gly Leu Phe Met
 85 90

<210> 1060
 <211> 174
 <212> PRT
 <213> Pinus radiata

<400> 1060
 Met Ala Pro Ser Asn Asn Arg Arg Asp Asp Asn Gly Ala Arg Gly Val
 1 5 10 15
 His Phe Arg Gly Val Arg Lys Arg Pro Trp Gly Arg Tyr Ala Ala Glu
 20 25 30
 Ile Arg Asp Pro Trp Lys Lys Val Arg Leu Trp Leu Gly Thr Phe Asp
 35 40 45
 Thr Ala Glu Glu Ala Ala Arg Ala Tyr Asp Thr Ala Ala Ile Ser Leu
 50 55 60
 Arg Gly Pro Lys Ala Lys Thr Asn Phe Ala Tyr Ser Ser Pro Ser Ser
 65 70 75 80
 Ser Ser Ser Leu His Asn Asn Gln Ser Ser Ser Gln Asn Ser Ser Thr
 85 90 95
 Val Glu Ser Trp Pro Ser Ala Ala Pro Val Thr Arg Ser Gly Asp Leu
 100 105 110
 Glu Leu Pro Ala Ser Phe Leu Pro Arg Leu Gly Val Ser Thr Gly Arg
 115 120 125
 Arg Val Leu Asn Gly Gly Asn Pro Arg Ser Gly Arg Arg Ser Leu
 130 135 140
 Ser Glu Lys Asn Ser Gly Arg Lys Ala Glu Gly Ala Glu Ala Arg Thr
 145 150 155 160
 Thr Leu Ser Asp Ser Asp Ser Ser Ser Ser Ala Val Leu Asp
 165 170

<210> 1061
 <211> 121
 <212> PRT
 <213> Pinus radiata

<400> 1061
 Met Gly Pro Leu Met Gly Ser Pro Leu Gly Gly Gly Leu Gly Leu Ser
 1 5 10 15
 Pro Arg Met Gly Gly Gly Ile Gly Asn Gly Leu Gln Gly Gly Leu Gly
 20 25 30
 Val Gly Leu Ala Gly Leu Gly Ala Thr Ala Leu Thr Ile Gly Ala Ala

```

      35              40              45
Ser Pro Ala Asn Gln Leu Ser Ser Asp Gly Met Gly Asn Ser His Gly
  50              55              60
Asp Asn Ser Thr Val Ser Pro Ile Pro Tyr Gly Leu Asp Val Ser Val
  65              70              75              80
Arg Gly Arg Lys Arg Gly Gly Pro Val Glu Lys Val Val Glu Arg Arg
      85              90              95
Gln Arg Arg Met Ile Lys Asn Arg Glu Ser Ala Ala Arg Ser Arg Ala
      100              105              110
Arg Lys Gln Ala Tyr Thr Val Asn Trp
      115              120

```

<210> 1062

<211> 145

<212> PRT

<213> Pinus radiata

```

      <400> 1062
Glu Thr Arg Gly Gly Ser Ser Gly Asp Phe Leu Pro Pro Pro Pro Thr
  1              5              10              15
Thr Lys Cys Ser Glu Glu Leu Gln Asn Lys Ile Thr Lys Tyr Ile Ala
      20              25              30
Leu Lys Ser Ala Gly Arg Ser Phe Asn Lys Glu Leu Arg Asn Ser Lys
      35              40              45
Gly Tyr Arg Asn Pro Asp Phe Leu Gln Arg Ala Val Lys Tyr Gln Gly
      50              55              60
Ile Asp Gln Ile Gly Ser Cys Phe Lys Lys Glu Ile Phe Asp Pro His
      65              70              75              80
Gly Tyr Asp Pro Ser Asp Tyr Tyr Asp Ala Leu Ala Leu Glu Leu Lys
      85              90              95
Arg Glu Phe Glu Arg Arg Glu Gln Glu Lys Gln Lys Asn Gln Arg Val
      100              105              110
Asp Phe Val His Gly Ala Val Gln Thr Thr Ser Val Gln Ser Val Ser
      115              120              125
Lys Pro Ile Val Gln Val Met Gly Gly Gln Lys Val Pro Val Val Gly
      130              135              140
Val
145

```

<210> 1063

<211> 236

<212> PRT

<213> Pinus radiata

```

      <400> 1063
Met Ser Ser Pro Gln Ser Asn Lys Trp Leu Ser Tyr Phe Asp Glu Pro
  1              5              10              15
Leu Leu Asp Asp Val Gly Val Gly Gln Pro Ala Asn Pro Phe Phe Thr
      20              25              30
Cys Gly Gln Gly Ile Asn Asp Gln Pro Asp Val Ser Val Glu Ile Asp
      35              40              45
Gly Pro Asn Lys Asp Met Asp Glu Gln Asp Lys Leu Cys Pro Arg Lys
      50              55              60
Arg Ser Arg Glu Glu Ser Ser Gly Gly Pro Gly Ser Lys Ala Cys Arg
      65              70              75              80
Glu Lys Met Arg Arg Asp Arg Leu Asn Asp Arg Phe Met Glu Leu Ser
      85              90              95
Ser Val Leu Glu Pro Gly Arg Pro Pro Lys Thr Ala Asp Lys Ala Thr
      100              105              110
Ile Leu Ser Asp Ala Ala Arg Val Met Thr Gln Leu Arg Thr Glu Ala
      115              120              125

```

Gln Asn Leu Lys Ala Glu Asn Glu Arg Leu Gln Glu Ala Ile Lys Asp
 130 135 140
 Leu Lys Ala Glu Lys Asn Glu Leu Arg Asp Glu Lys Leu Arg Met Lys
 145 150 155 160
 Ala Glu Lys Glu Lys Leu Asp Gln Gln Val Lys Ala Met Ala Leu Pro
 165 170 175
 Thr Gly Phe Val Pro His Pro Ala Ala Phe His Ala Ala Ala Phe
 180 185 190
 Ala Ala Gln Ser Gln Ala Ala Ala Asn Lys Thr Met Pro Val Pro Gly
 195 200 205
 Tyr Pro Gly Met Ala Met Trp Gln Trp Met Pro Ala Val Val Asp
 210 215 220
 Thr Ser Gln Asp His Val Leu Arg Pro Pro Val Ala
 225 230 235

<210> 1064

<211> 145

<212> PRT

<213> Pinus radiata

<400> 1064

Met Gly Ser Arg Thr Met Leu Ser Ser Asn Gly Gly Arg Thr Pro Gln
 1 5 10 15
 Phe Gln Pro Leu Val Arg Gln Asn Ser Leu Tyr Asn Leu Thr Leu Glu
 20 25 30
 Glu Val Gln Asn Gln Leu Gly Asp Ala Ser Lys Pro Leu Ser Ser Met
 35 40 45
 Asn Met Asp Glu Leu Leu Lys Asn Ile Trp Thr Gln Glu Glu Ser Gln
 50 55 60
 Ala Ile Ser Met Ala Ile Gly Asn Gly Pro Met Asn Gly Val Pro Pro
 65 70 75 80
 Asn Ser Ala Pro Ala Ser Gly Gly Leu Gln Arg Gln Gly Ser Leu Thr
 85 90 95
 Ile Pro Arg Thr Leu Ser Arg Lys Thr Val Asp Glu Val Trp Arg Asp
 100 105 110
 Ile Gln Gln Ser Gln Gly Lys Ser Asn Glu Glu Lys Lys Pro Gln Gln
 115 120 125
 Arg Gln Ser Thr Phe Gly Glu Met Thr Leu Glu Asp Phe Leu Val Lys
 130 135 140
 Ala
 145

<210> 1065

<211> 171

<212> PRT

<213> Pinus radiata

<400> 1065

Met Ala Ser Gly Asn Val Asp Pro Asp Gln Trp Glu Phe Ala Asn Glu
 1 5 10 15
 Asp Phe Leu Arg Gly Gln Arg Asn Leu Leu Lys Asn Ile His Arg Arg
 20 25 30
 Lys Pro Met His Ser His Ser Gln Asn Pro Gln Gln Gly Val Cys Asn
 35 40 45
 Asp Ala Ile Lys Tyr Glu Leu Glu Glu Glu Ile Gln Arg Leu Lys Arg
 50 55 60
 Asp Lys Gly Leu Leu Met Met Glu Leu Val Arg Ile Arg Gln Gln His
 65 70 75 80
 Gln Gly Thr Glu Met His Met Gln Thr Leu Glu Glu Arg Leu Gln Ala
 85 90 95
 Met Glu His Arg Gln Gln Gln Met Met Ala Phe Leu Ala Lys Ala Val

```

      100      105      110
Gln Lys Pro Gly Phe Val Ala Gln Leu Val Gln Gln Ser Glu Asn Asn
      115      120      125
Lys Leu Leu Glu Ala Ala Asn Lys Lys Arg Arg Leu Pro Lys Gln Glu
      130      135      140
Asn Cys Ser Glu Ala Gly Glu Thr Glu Leu Thr Asp Ser Gln Ile Val
145      150      155      160
Lys Tyr Gln Pro Ala Ser Gly Asp Glu Cys Ser
      165      170

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<210> 1066
<211> 112
<212> PRT
<213> Pinus radiata

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      <400> 1066
Val Ala Ala Ala Ser Ala Ser Ala Ser Gly Thr Ala Val Ala Ala Ser
 1      5      10      15
Leu Pro Val Asn Gly Ala Ala Gly Val Arg Ser Ser Val Asp Ser Glu
      20      25      30
His Ser Asp Ile Glu Ala Ser Phe Lys Glu Ala Glu Cys Ser Gln Ala
      35      40      45
Ile Val Glu Arg Arg Pro Arg Lys Arg Gly Arg Lys Pro Ala Asn Gly
      50      55      60
Arg Glu Glu Pro Leu Asn His Val Glu Ala Glu Arg Gln Arg Arg Glu
      65      70      75      80
Lys Leu Asn Gln Arg Phe Tyr Ala Leu Arg Ala Val Val Pro Asn Val
      85      90      95
Ser Lys Met Asp Lys Ala Ser Leu Leu Gly Asp Ala Ile Ser Tyr Ile
      100      105      110

```

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<210> 1067
<211> 73
<212> PRT
<213> Pinus radiata

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      <400> 1067
Leu Tyr Ala Glu Glu Ser Ser Thr Val Thr His Leu Gln Tyr Gln Gln
 1      5      10      15
Ser Ile Leu Glu Asn Asp Leu Arg Ser Lys Leu Lys Asp Asn Leu Gln
      20      25      30
Gln Pro Gln Asn Ser Gly Lys Lys Arg Arg Tyr Arg Gly Val Arg Gln
      35      40      45
Arg Pro Trp Gly Lys Trp Ala Ala Glu Ile Arg Asp Pro Lys Lys Ala
      50      55      60
Ala Arg Val Trp Leu Gly Thr Phe Asp
      65      70

```

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<210> 1068
<211> 203
<212> PRT
<213> Pinus radiata

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      <400> 1068
Asn Met Ala Lys His Thr Val Cys Ala Ser Phe Leu Asn Glu Gly Asp
 1      5      10      15
Phe Ile Cys Pro Pro Tyr Glu Asp Gly Ile Gly Leu Glu Trp Leu Ser
      20      25      30
Asp Phe Val Glu Asp Ser Phe Ala Ala Thr Gly Ser Ser Asn Ser Gly
      35      40      45
Ser Leu Ala Asp Leu Ser Lys Asp Lys Ile Asp Asp Asn Arg Glu Lys

```

50 55 60
 Lys Lys Gln Asn Pro Thr Asp Glu Ala Ile Ile Pro Glu Ile Pro Pro
 65 70 75 80
 Ile Lys Glu Thr Pro Arg Ser Gln Arg Ala Val Pro Gly Arg Ala Arg
 85 90 95
 Ser Lys Arg Arg Arg Ser Ser Gly Ala Pro Ile Arg Gly Trp Ser Thr
 100 105 110
 Ser Glu Asp Tyr Ala Leu Gln Asn Glu Gly Gly Met Lys Thr Val Thr
 115 120 125
 Gly Ala Asp Ala Ile Asn His Tyr Gln Ser Ser Ala Pro Gln Gln Gln
 130 135 140
 Pro Arg Arg Cys Thr His Cys Leu Ser Gln Arg Thr Pro Gln Trp Arg
 145 150 155 160
 Leu Gly Pro Leu Gly Pro Lys Thr Leu Cys Asn Ala Cys Gly Val Arg
 165 170 175
 Phe Lys Ser Gly Arg Leu Phe Pro Glu Tyr Arg Pro Ala Lys Ser Pro
 180 185 190
 Thr Phe Ile Arg Tyr Ile His Ser Asn Ser His
 195 200

<210> 1069

<211> 190

<212> PRT

<213> Pinus radiata

<400> 1069
 Gly Asn Ala Ala Arg Arg Pro His Asp Val Leu Leu Lys Leu Glu Lys
 1 5 10 15
 Leu Ser Ser Gln Thr Thr Leu Glu Ser Leu Gln Arg Leu Ile Val Gln
 20 25 30
 Lys Lys Cys Leu Leu Phe Gly Lys Lys Val Gly Ile Arg Ile Asp Gly
 35 40 45
 Lys Lys Thr Ala Asn Thr Glu Lys Val Asn Glu Arg Asn Thr Ile Pro
 50 55 60
 Arg Ile Ile Phe Gly Ala Leu Thr Phe Thr Arg Asn Arg Pro His Ala
 65 70 75 80
 Leu Ser Lys Asn Gly Ser Ile Ala Asp Thr Arg Arg Asn Ile Cys Gly
 85 90 95
 Ala Pro Gln Glu Asp Gly Thr Ile Cys Thr Ala Ile Pro Leu Lys Ser
 100 105 110
 Arg Lys Arg Cys Pro Asp His Lys Gly Gln Lys Gly Gln Lys Glu Lys
 115 120 125
 Asn Leu Ser Lys Ile Asn Ile Ser Ala Asn Val Glu Ser Arg Asn Gln
 130 135 140
 Gly Val Gly Glu His Glu Asn Glu Tyr Arg Tyr Cys Gly Val Leu Leu
 145 150 155 160
 Lys Asp Gly Ser Thr Cys Lys Ile Ile Pro Asp Lys Gly Arg Lys Arg
 165 170 175
 Cys Asn Ile His Lys Gly Met Arg Ile Pro Gly Gln Ala Lys
 180 185 190

<210> 1070

<211> 81

<212> PRT

<213> Pinus radiata

<400> 1070
 Met Ala Thr Ser Asn Pro Phe Asp Leu Leu Gly Asp Asp Asp Asn Gly
 1 5 10 15
 Asp Val Ser Gln Leu Val Phe Val Pro Gln Glu Lys Pro Thr Val Lys
 20 25 30

Lys Ala Ser Gln Pro Ala Gln Thr Ala Thr Ala Lys Leu Pro Ser Lys
 35 40 45
 Pro Leu Pro Pro Ala Gln Ala Val Arg Glu Ser Arg Asn Gly Val Gly
 50 55 60
 Arg Gly Gly Arg Gly Gly Arg Gly Gly Asp Arg Asn Gln Asp Val Gly
 65 70 75 80
 Tyr

<210> 1071
 <211> 154
 <212> PRT
 <213> Pinus radiata

<400> 1071
 Met Asn Arg Glu Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1 5 10 15
 Gly Lys Gly Thr Met Arg Arg Lys Lys Lys Thr Ile His Arg Thr Thr
 20 25 30
 Thr Thr Asp Asp Lys Lys Leu Gln Ser Thr Leu Lys Arg Ile Gly Val
 35 40 45
 Asn Ala Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Leu Glu Asp Ser
 50 55 60
 Val Ile His Phe Gln Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn
 65 70 75 80
 Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Arg Leu Gln Asp Leu
 85 90 95
 Leu Pro Gly Ile Ile Asn Gln Leu Gly Pro Asp Ser Phe Ala Asn Leu
 100 105 110
 Arg Lys Leu Ala Gln Gln Phe Gln Lys Glu Val Pro His Pro Ala Val
 115 120 125
 Glu Glu Asp Asp Asp Val Pro Glu Leu Val Glu Gly Glu Thr Phe
 130 135 140
 Glu Glu Ala Ala Lys Gln Glu Ser Ala Ala
 145 150

<210> 1072
 <211> 63
 <212> PRT
 <213> Pinus radiata

<400> 1072
 Met Pro His Gln His Gln Glu Arg Phe Pro Ser Gln Glu Gly
 1 5 10 15
 Ile Ser Trp Lys Arg Asp Asp Glu Leu Pro Gln Pro Gln Asn Pro Pro
 20 25 30
 Lys Lys Lys Arg Tyr Arg Gly Val Arg Gln Arg Pro Trp Gly Lys Trp
 35 40 45
 Ala Ala Glu Ile Arg Asp Pro Lys Lys Ala Ala Arg Val Trp Leu
 50 55 60

<210> 1073
 <211> 331
 <212> PRT
 <213> Pinus radiata

<400> 1073
 Met Gly Gln Ile Gly Gly Pro His Gly Tyr Pro Asn Ser Ser Pro Ser
 1 5 10 15
 Ala Gln Asp Ala Leu Tyr Glu Glu Leu Trp His Ala Cys Ala Gly Pro
 20 25 30

Leu Val Thr Leu Pro Arg Ile Gly Glu Arg Val Phe Tyr Phe Pro Gln
 35 40 45
 Gly His Met Glu Gln Val Glu Ala Ser Thr Asn Gln Gly Ala Asp Gln
 50 55 60
 His Met Pro Leu Phe Asn Leu Pro Tyr Lys Ile Leu Cys Arg Val Ile
 65 70 75 80
 Asn Val Gln Leu Lys Ala Glu Pro Asp Thr Asp Glu Val Phe Ser Gln
 85 90 95
 Ile Thr Leu Leu Pro Glu Ala Glu Gln Asp Glu Ser Ser Val Glu Lys
 100 105 110
 Glu Pro Leu Thr Pro Leu Pro Pro Lys Pro Leu Val Tyr Ser Phe Cys
 115 120 125
 Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly Phe Ser Val
 130 135 140
 Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro Leu Asp Met Ser Gln
 145 150 155 160
 Gln Pro Pro Ser Gln Asp Leu Val Ala Lys Asp Leu His Gly Val Glu
 165 170 175
 Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro Arg Arg His Leu Leu
 180 185 190
 Thr Thr Gly Trp Ser Val Phe Val Ser Ser Lys Arg Leu Val Ala Gly
 195 200 205
 Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly Glu Leu Arg Val Gly
 210 215 220
 Val Arg Arg Ala Met Arg Gln Gln Asn Asn Val Pro Ser Ser Val Ile
 225 230 235 240
 Ser Ser His Ser Met His Leu Gly Val Ile Ala Thr Ala Ser His Ala
 245 250 255
 Val Thr Thr Lys Thr Met Phe Ser Val Tyr Tyr Lys Pro Arg Thr Ser
 260 265 270
 Pro Ser Glu Phe Ile Ile Pro Tyr Asp Gln Tyr Met Glu Ser Met Lys
 275 280 285
 Ile Asn Phe Ser Val Gly Met Arg Phe Lys Met Lys Phe Glu Gly Glu
 290 295 300
 Glu Val Pro Glu Gln Arg Phe Thr Gly Thr Ile Val Gly Ile Ser Asp
 305 310 315 320
 Ala Asp Pro Val Asn Trp Pro Asn Ser Lys Trp
 325 330

<210> 1074

<211> 113

<212> PRT

<213> Pinus radiata

<400> 1074

Met Thr Gln Ala Thr Asn Tyr Thr Ala Gly Thr Ile Arg Asp Asp Gln
 1 5 10 15
 Glu Glu Gln Cys Val Arg Arg Gly Pro Trp Thr Val Asp Glu Asp Met
 20 25 30
 Ser Leu Ile Arg Cys Val Thr Thr Arg Gly Glu Gly Arg Trp Asn Thr
 35 40 45
 Val Ala Lys Phe Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu
 50 55 60
 Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Lys Arg Gly Asn Ile Thr
 65 70 75 80
 Pro Glu Glu Gln Leu Ile Leu Glu Leu His Arg Leu Trp Gly Asn
 85 90 95
 Arg Trp Ser Lys Ile Ala Arg Gln Leu Pro Gly Arg Thr Asp Asn Glu
 100 105 110
 Ile

<210> 1075
 <211> 44
 <212> PRT
 <213> Pinus radiata

<400> 1075
 Met Ala Glu Asn Tyr Gly Ser Pro Asp Ser Ser Pro Arg Ser Glu Asn
 1 5 10 15
 Glu Ser Gly Gly Gly His Met Gly Gly Ser Asp Phe Ser Val Lys Glu
 20 25 30
 Gln Asp Arg Phe Leu Pro Ile Ala Asn Val Gly Arg
 35 40

<210> 1076
 <211> 282
 <212> PRT
 <213> Pinus radiata

<400> 1076
 Met Pro Met Leu Ala Glu Thr Tyr Arg Asp Ser Phe Glu Thr Thr Ser
 1 5 10 15
 Gly Gly Ser Ser Val Asp Leu Val Gly Met Ala Leu Pro Gly Leu Ala
 20 25 30
 Pro Asn Leu Ser Ser Ala Ser Val Ser Ala Ser Ala Ser Glu Asp Ser
 35 40 45
 Ala Lys Lys Ile Arg Lys Pro Tyr Thr Ile Thr Lys Ser Arg Glu Ser
 50 55 60
 Trp Ser Glu Gln Glu His Asp Lys Phe Leu Glu Ala Leu Gln Leu Phe
 65 70 75 80
 Asp Arg Asp Trp Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr Val
 85 90 95
 Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln Lys
 100 105 110
 Asn Gly Thr Arg Glu His Val Pro Pro Arg Pro Lys Arg Lys Ala
 115 120 125
 Ser His Pro Tyr Pro Gln Lys Ala Ser Lys Asn Val Pro Val Ser Gln
 130 135 140
 Gln Val Ser Thr Ala Phe Pro Thr Ala Ala Thr Gln Leu Asp Ser Gly
 145 150 155 160
 Tyr Tyr Pro Arg Ala Glu Ser Ser Ser Ile Leu Thr Lys Ser Gly Ser
 165 170 175
 Ser Cys Pro Thr Val Ser Ser Trp Val His His Thr Ile Pro Ser Ile
 180 185 190
 Asp Ala Ser Phe Val Glu Lys Asp Asp Gly Gly Pro Pro Gly Ile Glu
 195 200 205
 Thr Gly Asn Asn Cys Ser Ser Gly Ser Thr Glu Ser Ser Pro Pro Thr
 210 215 220
 Trp Pro Pro Cys Ser Glu Ile Pro Glu Lys Val Lys Pro Asp Phe Ser
 225 230 235 240
 Gln Val Tyr Lys Phe Ile Gly Ser Val Phe Asp Pro Ser Thr Thr Asp
 245 250 255
 His Leu Lys Lys Leu Lys Glu Trp Ile Gln Leu Ile Leu Lys Leu Cys
 260 265 270
 Cys Thr His Glu Glu Pro Phe His Asn Leu
 275 280

<210> 1077
 <211> 104
 <212> PRT
 <213> Pinus radiata

<400> 1077

```

Met Gly Arg Ser Phe Ser Cys Trp Ser Cys Ser Lys Asp Asn Gly His
 1          5          10          15
Glu Arg Leu Asn Arg Gly Ser Trp Ser Ala Glu Glu Asp Thr Ile Leu
          20          25          30
Ser Glu His Ile Lys Thr His Gly Val Gly Arg Trp Thr Ser Leu Pro
          35          40          45
Lys Lys Ala Gly Leu Lys Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp
          50          55          60
Phe Asn Tyr Leu Arg Ser Asp Ile Lys His Gly Asn Ile Ser Pro Glu
          65          70          75          80
Glu Glu Glu Leu Ile Arg Leu His Arg Leu Leu Gly Asn Arg Trp
          85          90          95
Ser Leu Ile Ala Gly Arg Leu Pro
          100

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<210> 1078

<211> 93

<212> PRT

<213> Pinus radiata

<400> 1078

```

Met Asp Arg Asp Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1          5          10          15
Gly Lys Gly Thr Val Arg Arg Lys Lys Lys Ala Val His Arg Ala Thr
          20          25          30
Thr Thr Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Leu Gly Val
          35          40          45
Asn Thr Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Glu Met
          50          55          60
Val Ile His Phe Ile Asn Pro Lys Val Gln Ala Ser Ile Asn Ala Asn
          65          70          75          80
Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Asn Leu
          85          90

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<210> 1079

<211> 118

<212> PRT

<213> Pinus radiata

<400> 1079

```

Met Asp Arg Asp Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1          5          10          15
Gly Lys Gly Thr Val Arg Arg Lys Lys Lys Ala Val His Arg Ala Thr
          20          25          30
Thr Thr Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Leu Gly Val
          35          40          45
Asn Thr Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Glu Met
          50          55          60
Val Ile His Phe Ile Asn Pro Lys Val Gln Ala Ser Ile Asn Ala Asn
          65          70          75          80
Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Asn Leu Gln Asp Leu
          85          90          95
Leu Pro Gly Ile Ile Asn Gln Leu Gly Pro Asp Asn Leu Ile Asn Leu
          100          105          110
Lys Lys Ile Ala Gln Gln
          115

```

<210> 1080

<211> 191

<212> PRT

<213> Pinus radiata

<400> 1080

```

Asp Asp Glu Glu Glu Ala Ser Leu Lys Gly Lys Val Arg Trp Gly Leu
 1          5          10          15
Asp Ser Ile Ala Ala Leu Gly Leu Lys Phe Ile Lys Arg Ala Leu Ala
 20          25          30
Lys Lys Lys Thr Val Gly Ile Ala Gly Gly Ala Asp Arg Val Leu Leu
 35          40          45
Ser Gly Arg Met Lys Leu Lys Pro Lys Gly Leu Met Cys Val Phe Cys
 50          55          60
Gly Leu Leu Arg Val Arg Gly Asn Gly Ile Ile Gly Val Lys Val Phe
 65          70          75          80
Leu Glu Lys Tyr Ala Gly Ser Ser Gln Gln Glu Ile Leu Arg Val Glu
 85          90          95
Ile Ser Leu Ser Phe Ala Phe Gln Asn Glu Asp Arg Leu Leu Pro Ala
100          105          110
Ala Ser Gly Arg Gly Lys Glu Glu Ser Gln Phe Arg Ala Met Ala Cys
115          120          125
Met Cys Trp Ala Thr Cys Val Pro Thr Cys Cys Trp Glu Pro Cys Cys
130          135          140
Ile Phe Ser Ser Arg Ser Gln Ala Gly Gly Cys Leu Asn Lys Gln Glu
145          150          155          160
Val Asp Ala His Ile Pro Asn Tyr Pro Asn Leu Pro Pro Gln Leu Ile
165          170          175
Cys His Tyr Thr Met Leu Leu Cys Arg Gln Met Trp Arg Gln Met
180          185          190

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<210> 1081

<211> 86

<212> PRT

<213> Pinus radiata

<400> 1081

```

Ile Asp Ser Ser Glu Lys Arg Leu Lys Gly Lys Asn Tyr Ile Asp Ile
 1          5          10          15
Thr Thr Glu Arg Ala Ala Gln Glu Pro Gly Cys Ile Met Ala Arg Pro
 20          25          30
Gln Arg Tyr Arg Gly Val Arg Gln Arg His Trp Gly Ser Trp Val Ser
 35          40          45
Glu Ile Arg His Pro Leu Leu Lys Thr Arg Ile Trp Leu Gly Thr Phe
 50          55          60
Glu Thr Ala Glu Asp Ala Ala Arg Ala Tyr Asp Glu Ala Ala Arg Met
 65          70          75          80
Met Cys Gly Pro Arg Ala
 85

```

<210> 1082

<211> 119

<212> PRT

<213> Pinus radiata

<400> 1082

```

Met Val Arg Ser Pro Cys Cys Asp Lys Val His Thr Asn Asn Lys Gly
 1          5          10          15
Ala Trp Thr Lys Glu Glu Asp Glu Arg Leu Ile Ala His Ile Glu Ala
 20          25          30
His Gly Glu Gly Ser Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu
 35          40          45
Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro

```

```

50          55          60
Asp Leu Lys Arg Gly Ser Phe Ser Glu Glu Asp Asp Leu Ile Ile
65          70          75          80
Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg
          85          90          95
Leu Gln Gly Glu Arg Thr Thr Lys Ile Lys Asn Tyr Trp Asn Thr His
          100          105          110
Met Lys Arg Lys Leu Leu Ser
          115

```

```

<210> 1083
<211> 128
<212> PRT
<213> Pinus radiata

```

```

<400> 1083
Met Gly Arg Ser Pro Cys Pro Pro Lys Glu Ala Leu Asn Arg Gly Ala
1          5          10          15
Trp Thr Gly Met Glu Asp Thr Ile Leu Thr Glu Tyr Ile Arg Val His
          20          25          30
Gly Ser Gly Gly Trp Lys Asp Ile Ser Lys Arg Ala Gly Leu Lys Arg
          35          40          45
Cys Ala Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp
          50          55          60
Ile Lys Arg Gly Asn Ile Ser Pro Glu Glu Glu Glu Leu Ile Ile Arg
65          70          75          80
Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu
          85          90          95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Met
          100          105          110
Ser Lys Lys Pro Trp Leu Ser Met Asp Glu Ser Gln Ser Asn Thr Ser
          115          120          125

```

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<210> 1084
<211> 126
<212> PRT
<213> Pinus radiata

```

```

<400> 1084
Glu Glu Glu Asp Glu Glu Ala Gly Lys Glu Leu Glu Ala Trp Glu
1          5          10          15
Arg Ala Tyr Ala Asp Glu Arg Ser Trp Glu Thr Leu Gln Glu Asp Glu
          20          25          30
Glu Gly Leu Leu Asn Phe Asp Lys Lys Gln Gln Gln Gln Gln Arg
          35          40          45
Gln Tyr Arg Arg Arg Leu Gln Ser Ala Ala Ala Ala Ser Asn Ile
          50          55          60
Gln Arg Gly Leu Ile Arg Tyr Leu Tyr Ile Ile Ile Asp Phe Ser Arg
65          70          75          80
Ala Ala Ala Glu Lys Asp Phe Lys Pro Asn Arg Met Val Val Val Ala
          85          90          95
Asn Cys Val Glu Ala Phe Val Arg Glu Phe Phe Asp Gln Asn Pro Leu
          100          105          110
Ser Gln Leu Gly Ile Val Ile Ile Lys Asn Gly Val Ala His
          115          120          125

```

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<210> 1085
<211> 139
<212> PRT
<213> Pinus radiata

```

<400> 1085

```

Arg Ala Pro Cys Cys Glu Lys Thr His Thr Asn Lys Gly Ala Trp Ser
1          5          10          15
Lys Asp Glu Asp Glu Ala Leu Val Ala Tyr Ile Gln Ala His Gly Glu
20          25          30
Gly Ser Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Gln Arg Cys Gly
35          40          45
Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys
50          55          60
Arg Gly Asn Phe Ser Pro Glu Glu Asp Glu Ile Ile Ile Lys Leu His
65          70          75          80
Ser Met Leu Gly Asn Lys Trp Ser Leu Ile Ala Ser Lys Leu Pro Gly
85          90          95
Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile Lys Arg
100          105          110
Lys Met Leu Glu Arg Gly Leu Asp Pro Ser Thr His Leu Pro Leu Met
115          120          125
Ser Asp His Gly Ser Phe Glu Ser Ser Ser Lys
130          135

```

<210> 1086

<211> 189

<212> PRT

<213> Pinus radiata

<400> 1086

```

Lys Val Val Pro Pro Leu Asp Phe Thr Gln Gln Pro Pro Ala Gln Glu
1          5          10          15
Leu Thr Ala Arg Asp Leu His Asp Asn Glu Trp Lys Phe Arg His Ile
20          25          30
Phe Arg Gly Gln Pro Lys Arg His Leu Leu Thr Thr Gly Trp Ser Val
35          40          45
Phe Val Ser Ala Lys Arg Leu Ala Ala Gly Asp Ser Val Leu Phe Ile
50          55          60
Trp Asn Glu Lys Gly Gln Leu Leu Leu Gly Ile Arg Arg Ala Asn Arg
65          70          75          80
Pro Gln Ala Val Met Pro Ser Leu Val Leu Ser Ser Asp Ser Met His
85          90          95
Ile Gly Leu Leu Ala Ala Ala Ala His Ala Ala Ala Thr Asn Ser Arg
100          105          110
Phe Thr Ile Phe Tyr Asn Pro Arg Ala Ser Pro Ser Glu Phe Val Ile
115          120          125
Pro Leu Ala Lys Tyr Val Lys Ala Val Tyr His Thr Arg Val Ser Ile
130          135          140
Gly Met Arg Phe Arg Met Leu Phe Glu Thr Glu Glu Ser Ser Val Arg
145          150          155          160
Arg Tyr Met Gly Thr Ile Thr Gly Ile Ser Asp Leu Asp Gln Val Arg
165          170          175
Trp Pro Asn Ser His Trp Arg Ser Val Lys Val Gly Trp
180          185

```

<210> 1087

<211> 132

<212> PRT

<213> Pinus radiata

<400> 1087

```

Trp Glu Phe Ala Asn Asp Cys Phe Arg Lys Gly Glu Lys Gln Leu Leu
1          5          10          15
Cys Glu Ile His Arg Arg Lys Ser Val Gln Gln Ser Ser Ala Ala Pro
20          25          30

```

Ala Ser Arg Cys Val Ser Pro Val Asn Ser Val Glu Glu Gln Ala Leu
 35 40
 Ser Ser Thr Ser Ser Pro Val Ser Ser His Ala Glu Ala Ala Leu Val
 50 55 60
 Asn Cys Gly Gln Asn Ser Thr Ser Gly Leu His Gly Glu Asn Glu Lys
 65 70 75 80
 Leu Arg Lys Asp Asn Leu Leu Leu Met Ser Glu Leu Ala Gln Met Lys
 85 90 95
 Lys Gln Cys Asn Asp Leu Leu Leu Phe Leu Ser Lys Cys Val Asn Ile
 100 105 110
 Thr Pro Asp Asn Leu Ser Asn Ile Leu Ile Ala Ala Ser Gln Thr Asn
 115 120 125
 Cys Arg Asp Glu
 130

<210> 1088

<211> 214

<212> PRT

<213> Pinus radiata

<400> 1088

Gly Lys Trp Gly Val Pro Asp Asn Leu Tyr Gly Ala Gln Glu Asp Ser
 1 5 10 15
 Gly Gly Ser Ser Val Lys Gln Lys Asn Leu Lys Asp Gly Asp Gln Phe
 20 25 30
 Thr Ser Ser Asp Glu Ala Asp Ser Glu Val Asn Glu Phe Asn Ile Met
 35 40 45
 Lys Arg Ser Asn Ser Gly Val Gly Tyr Glu Asp Asn Lys Arg Ser Gly
 50 55 60
 Gly Gln Gly Asp Gly Asn Gln Tyr Arg Ser Arg His Ser Arg Ser Ile
 65 70 75 80
 Ser Met Asp Ser Ile Met Ser Lys Met His Asn Phe Ser Glu Asp Leu
 85 90 95
 Glu Gln Glu Pro Ser Gln Gly Arg Asn Val Arg His Ser His Ser Asn
 100 105 110
 Ser Met Asp Gly Ser Thr Asn Phe Asn Val Glu Phe Gly Asn Gly Glu
 115 120 125
 Phe Ser Ala Ser Glu Met Lys Lys Ile Met Ala Ser Glu Lys Leu Ala
 130 135 140
 Glu Leu Ala Thr Val Asp Pro Lys Arg Val Lys Arg Ile Leu Ala Asn
 145 150 155 160
 Arg Gln Ser Ala Ala Arg Ser Lys Glu Arg Lys Met Arg Tyr Ile Ser
 165 170 175
 Glu Leu Glu Arg Lys Val Gln Thr Leu Gln Thr Glu Ala Thr Thr Leu
 180 185 190
 Ser Ala Gln Leu Thr Leu Leu Gln Arg Asp Gln Leu Asp Trp Ala Val
 195 200 205
 Arg Thr Thr Ser Ser Ser
 210

<210> 1089

<211> 97

<212> PRT

<213> Pinus radiata

<400> 1089

Met Ala Asp Gly His Gln Phe Asn Asn Ile Leu Leu Val Gly Arg Gly
 1 5 10 15
 Gly Thr Asn Pro Gly Gln Leu Arg Ile His Ser Gly Gly Ile Val Trp
 20 25 30
 Arg Arg Gln Gly Gly Lys Val Val Asp Val Ala Lys Asn Glu Val

```

          35          40          45
Lys Ser Leu Ser Trp Thr Arg Val Pro Arg Gly Tyr Gln Leu Gly Val
 50          55          60
Lys Leu Lys Ala Gly Leu Asn Ile Lys Leu Ala Gly Phe Arg Glu Gln
65          70          75          80
Asp Val Gly Asn Leu Thr Asn Phe Met Thr Asn Thr Ile Gly Leu Ala
          85          90          95
Pro

```

<210> 1090
 <211> 108
 <212> PRT
 <213> Pinus radiata

```

<400> 1090
Met Gly Asp His Ser Gly Gly Glu Ser Ser Pro His Ser Asp Ile Glu
 1          5          10          15
Ser Thr Gly Ile His Asn Asn Gly Ser Ser Ser Ser Ser Gln Ser Ile
          20          25          30
Ile Arg Glu Gln Asp Arg Leu Leu Pro Ile Ala Asn Val Gly Arg Ile
          35          40          45
Met Lys Lys Thr Leu Pro Thr Asn Ala Lys Ile Ser Lys Glu Ala Lys
50          55          60
Glu Ile Met Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Val Thr Gly
65          70          75          80
Glu Ala Ser Asp Lys Cys His Lys Glu Lys Arg Lys Thr Ile Asn Gly
          85          90          95
Asp Asp Ile Leu Trp Ala Met Thr Thr Leu Gly Phe
          100          105

```

<210> 1091
 <211> 90
 <212> PRT
 <213> Pinus radiata

```

<400> 1091
Arg Asn Ile Gln Arg Asn Glu Tyr His Asn Leu Phe Asn Phe Ile Ser
 1          5          10          15
Ser Lys Gly Leu Lys Ile Met Asn Leu Gly Asp Ala His Gly Thr Ser
          20          25          30
Gly Val Ala Ala Val Leu Glu Asn Ser Asp Asp Glu Ala Val Asp Pro
          35          40          45
His Leu Glu Arg Ile Lys Ser Ala Arg Glu Gly Gly Ala Gly Glu Asp
50          55          60
Ser Asp Glu Glu Ala Cys Tyr Thr Gly Asp Leu Ser Leu Ile Cys Ala
65          70          75          80
Val Val Lys Glu Leu Ile Cys Thr His Asp
          85          90

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<210> 1092
 <211> 133
 <212> PRT
 <213> Pinus radiata

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<400> 1092
Met Gly Cys Val Ser Ser Lys Val Glu Asn Glu Glu Leu Val Lys Arg
 1          5          10          15
Cys Arg Asp Arg Arg Arg Leu Met Lys Gln Ala Val Asn Ser Arg His
          20          25          30
Asn Phe Ala Ala Ala His Ile Ala Tyr Leu Arg Ala Leu Gln Asn Thr

```


35 40 45
 Gly Asn Ala Leu Val Gln Phe Ala Glu Gly Glu Ser Ala Met Asn
 50 55 60
 Gly Asn Ala Ile Glu Glu Ala Ala Thr Pro Met Pro Ala Thr Pro Leu
 65 70 75 80
 Thr Ala Ser His Arg His Pro Met Lys Phe His Pro Pro Pro Pro
 85 90 95
 Pro Pro Pro Pro Leu Val Pro Ser Ser Pro Ser Val Ser Pro Ser Met
 100 105 110
 Glu Ser Phe Arg Met Pro Ser Lys His Asn Pro Leu Ser Arg Ser Thr
 115 120 125
 Ser Asp Ile Ser Tyr
 130

<210> 1093

<211> 148

<212> PRT

<213> Pinus radiata

<400> 1093
 Met Gly Arg Ala Pro Cys Cys Thr Lys Val Gly Leu Asn Lys Gly Ala
 1 5 10 15
 Trp Ser Ala Glu Glu Asp Ser Leu Leu Gly Arg Tyr Ile Gln Thr His
 20 25 30
 Gly Glu Gly Asn Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Arg Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Cys
 50 55 60
 Ile Lys Arg Gly Asn Ile Thr Thr Asp Glu Glu Leu Ile Ile Arg
 65 70 75 80
 Met His Ala Leu Leu Gly Asn Arg Trp Ser Ile Ile Ala Gly Arg Val
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr Asn Leu
 100 105 110
 Ser Lys Lys Leu Ala Val Arg Gly Ile Asp Pro Lys Thr His Lys Lys
 115 120 125
 Ile Thr Thr Asp Gly Thr Asn Arg Val Asn Gly Asp Arg Phe Ser Gln
 130 135 140
 Arg Lys Gly Glu
 145

<210> 1094

<211> 107

<212> PRT

<213> Pinus radiata

<400> 1094
 Arg Gln Leu Ile Arg Glu Leu Glu Gln Met Phe Asn Ile Glu Gly Glu
 1 5 10 15
 Leu Glu Asp Pro Ser Lys Gly Trp Gln Val Val Tyr Thr Asp Asn Glu
 20 25 30
 Gly Asp Met Met Leu Val Gly Asp Asp Pro Trp Gln Glu Phe Cys Ser
 35 40 45
 Ile Val Arg Lys Ile Tyr Ile Tyr Thr Arg Glu Glu Val Glu Lys Met
 50 55 60
 Thr Pro Gln Thr Pro Ser Ala Asn Ser Arg Asp Val Gln Lys Ser Leu
 65 70 75 80
 Ser Gln Glu Glu Thr Ser Arg Ser Ser Asp Arg Gln Asp Ser Ser Ile
 85 90 95
 Ala Gly Val Thr Ala Glu Arg Ser Ser Asp Ala
 100 105

<210> 1095
 <211> 275
 <212> PRT
 <213> Pinus radiata

<400> 1095
 Met Ser Asn Gly Arg Leu Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro
 1 5 10 15
 Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr
 20 25 30
 Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser
 35 40 45
 Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val
 50 55 60
 Glu His Arg Pro Phe Thr Pro Ser Glu Asp Ala Ala Ile Leu Gln Ala
 65 70 75 80
 His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg Ala Leu Pro
 85 90 95
 Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu Arg
 100 105 110
 Arg Arg Cys Arg Asp Pro Lys Lys Gly Ile Val Val His Leu Asp Asp
 115 120 125
 Glu Ile Ser Ser Leu Asp Ala Ala Arg Lys Arg Ser Ser Asp Gly Phe
 130 135 140
 Ser His Asp Gly Ser Ser Ala Leu Glu Asp Asn Gly Cys Ser Ser Trp
 145 150 155 160
 Glu Val Asp Ser Lys Arg Leu Lys Arg Leu Gly Glu Leu Gly Thr Glu
 165 170 175
 Gln Gly Pro Glu Val Glu Ala Glu Val Glu Val Ser Asp Arg Ser Asp
 180 185 190
 Ala Asn Pro Gly Arg Val Leu Tyr Arg Pro Val Pro Val Val Ser Phe
 195 200 205
 Phe Ser Ser Phe Gly Lys Thr Val Ala Asn Leu Gln Glu Thr Ala Ala
 210 215 220
 Gly Ala Val Gly Val Asp Pro Pro Thr Ser Leu Ser Leu Pro
 225 230 235 240
 Gly Leu Asp Pro Ala Ile Pro Ser Pro Lys Leu Ser Thr Gln Lys Asp
 245 250 255
 Ser His Asn Asn Ser Thr Val Asn Asn Asn Ile Pro Ile Pro Pro Val
 260 265 270
 Val Asn Thr
 275

<210> 1096
 <211> 128
 <212> PRT
 <213> Pinus radiata

<400> 1096
 Glu Phe Gly Arg Ser Ser Glu Lys Gly Arg Gly Tyr Gly Arg Gly Arg
 1 5 10 15
 Gly Arg Gly Gly Arg Gly Gly Tyr Asn Asp Ala Gly Asp Glu Ser
 20 25 30
 Gln Arg Pro Arg Arg Gln Tyr Glu Arg Arg Ser Gly Thr Gly Arg Gly
 35 40 45
 Tyr Glu Val Lys Arg Glu Gly Ala Gly Gln Gly Asn Trp Gly Thr Pro
 50 55 60
 Thr Asp Gln Gly Phe Thr Glu Glu Pro Glu Glu Leu Ser Arg Ala Glu
 65 70 75 80
 Glu Glu Lys Thr Val Thr Pro Glu Lys Gln Glu Glu Gln Lys Pro Ser

				85						90					95				
Glu	Glu	Ser	Asn	Gln	Glu	Ile	Pro	Ala	Pro	Glu	Ser	Glu	Glu	Lys	Lys				
			100					105					110						
Glu	Glu	Glu	Glu	Asp	Lys	Asp	Met	Thr	Leu	Asp	Glu	Tyr	Glu	Lys	Val				
			115				120					125							

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<210> 1097
<211> 135
<212> PRT
<213> Pinus radiata
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<400> 1097															
Ala	Val	Asn	Ser	Ser	Leu	Ser	Val	Gly	Met	Arg	Phe	Lys	Met	Arg	Phe
1				5				10					15		
Glu	Gly	Glu	Glu	Ser	Pro	Glu	Arg	Arg	Phe	Thr	Gly	Thr	Ile	Ile	Gly
			20					25					30		
Met	Gly	Glu	Val	Asp	Asn	Val	Arg	Trp	Pro	Glu	Ser	Lys	Trp	Arg	Ser
			35				40					45			
Leu	Lys	Val	Gln	Trp	Asp	Glu	Thr	Ser	Val	Val	Pro	Arg	Pro	Glu	Arg
	50					55					60				
Val	Ser	Pro	Trp	Glu	Ile	Glu	Thr	Phe	Val	Ala	Ser	Ser	Ala	Ala	Leu
65				70					75						80
Asn	Pro	Leu	Pro	Ala	Pro	Arg	Thr	Lys	Lys	Pro	Arg	Pro	Asn	Leu	Val
				85					90					95	
Ser	Ser	Ser	Gln	Glu	Leu	Met	Ile	His	Gly	Ser	Gly	Lys	Thr	Ala	Thr
			100					105					110		
Asp	Ser	Ser	Gln	Val	His	Arg	Leu	Pro	Arg	Val	Leu	Gln	Gly	Gln	Glu
			115				120					125			
Met	Arg	Thr	Phe	Gly	Gly	Ser									
	130					135									

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<210> 1098
<211> 46
<212> PRT
<213> Pinus radiata
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<400> 1098

Ala	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Leu	Asn	Tyr	Leu	Arg	Pro	Asp	Ile
1			5						10					15	
Lys	Arg	Gly	Asn	Ile	Ser	Pro	Glu	Glu	Glu	Glu	Leu	Ile	Ile	Arg	Leu
			20					25					30		
His	Arg	Leu	Leu	Gly	Asn	Arg	Tyr	Val	Glu	Asn	Arg	Gly	Thr		
		35					40					45			

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<210> 1099
<211> 113
<212> PRT
<213> Pinus radiata
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Met Gly Arg Ser Pro Cys Cys Ser Lys Glu Gly Leu Asn Arg Gly Ala																	
1				5				10								15	
Trp	Thr	Lys	Arg	Glu	Asp	Met	Ile	Leu	Ser	Glu	Tyr	Val	Arg	Ile	His		
			20					25					30				
Gly	Asp	Gly	Gly	Trp	Arg	Asn	Leu	Pro	Glu	Lys	Ala	Gly	Leu	Lys	Arg		
		35					40					45					
Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Leu	Asn	Tyr	Leu	Arg	Pro	Asp		
						55					60						
Ile	Lys	Arg	Gly	Asn	Ile	Cys	Pro	Ala	Glu	Glu	Glu	Leu	Ile	Ile	Arg		
65					70				75					80			
Leu	His	Arg	Leu	Leu	Gly	Asn	Arg	Trp	Ser	Leu	Ile	Ala	Gly	Arg	Leu		

85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu
 100 105 110
 Ser

<210> 1100
 <211> 148
 <212> PRT
 <213> Pinus radiata

<400> 1100
 Pro Tyr Leu His Glu Ser Arg His Leu His Ala Met Lys Arg Ala Arg
 1 5 10 15
 Gly Cys Gly Gly Arg Phe Leu Asn Thr Lys Lys Leu Glu Asp Ser Lys
 20 25 30
 Ala Asn Val Asp Asn Gly Lys Thr Pro Glu Gly His Thr Ala Gln Ala
 35 40 45
 Gly Ser Ser Ser Gly Ser Glu Val Leu Gln Ser Glu Asn Gly Asn Gly
 50 55 60
 Asn Ser Thr Gln Glu Leu His Gly Ala Cys Gly Met Ser Gly Ser Gln
 65 70 75 80
 Val Thr Ser Ile Ala Gln Ser Ser Glu Asn Gly Thr Thr Tyr Gln Tyr
 85 90 95
 Ser His Thr Asn Gly Ala Tyr Leu Asn His Tyr Gln His Pro His Phe
 100 105 110
 His Ile Ser Ala Phe His Pro Leu Ser Ser Gly Gly Glu Glu Gly Ser
 115 120 125
 Ser Ala Lys Gly Gly Ser Ile Ile Ser Gly Gly Ser Gln Gln Arg Val
 130 135 140
 Val Val Ile Gln
 145

<210> 1101
 <211> 48
 <212> PRT
 <213> Pinus radiata

<400> 1101
 Met Gly Arg Ser Pro Cys Pro Pro Lys Glu Ala Leu Asn Arg Gly Ala
 1 5 10 15
 Trp Thr Gly Met Glu Asp Thr Ile Leu Thr Glu Tyr Ile Arg Val His
 20 25 30
 Gly Ser Gly Gly Trp Lys Ala Ile Ser Lys Arg Ala Gly Glu Cys Gln
 35 40 45

<210> 1102
 <211> 191
 <212> PRT
 <213> Pinus radiata

<400> 1102
 Val Thr Arg Pro Gly Lys Phe Arg Ser Cys Gln Asp Gly Tyr Ala Val
 1 5 10 15
 Arg Ala Ser Leu Lys Ala Glu Asp Gly Val Leu Tyr Pro Leu Glu Lys
 20 25 30
 Ser Phe Phe Phe Leu Pro Lys Pro Pro Thr Leu Ile Leu His Glu Glu
 35 40 45
 Ile Glu Tyr Leu Glu Phe Glu Arg His Gly Ala Ala Gly Thr Ser Ser
 50 55 60
 Met Ser Ser His Tyr Phe Asp Leu Ile Ile Lys Leu Lys Ser Glu Gln

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65              70              75              80
Glu His Gln Phe Arg Asn Ile Gln Arg Asn Glu Tyr His Asn Leu Phe
              85              90              95
Ser Phe Ile Asn Thr Lys Gly Leu Lys Ile Ile Asn Leu Gly Ala Thr
              100              105              110
Glu Thr Ile Gly Gly Val Ala Ala Ala Leu Gln Asn Ser Asp Asp Glu
              115              120              125
Ala Val Asp Pro His Leu Glu Arg Ile Lys Ile Tyr Val Met Val Glu
              130              135              140
Leu Val Leu Lys Thr Ala Thr Lys Arg Met Lys Thr Leu Leu Gln Lys
              145              150              155
Thr Met Met Leu Asp Leu Gln Gln Met Ser Gln Lys Lys Arg Asp Gln
              160              165              170
Met Gln Val Arg Val Gln Arg Ser Ser Asn Leu Gln Arg Lys Lys
              180              185              190

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<210> 1103
<211> 106
<212> PRT
<213> Pinus radiata

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<400> 1103
Met Ser Pro Pro Pro Ser Tyr Ser Met Phe Pro Asn Ser Gly Met Gly
1              5              10              15
Leu Asn Pro Ser Val Thr Ser Ser Glu Pro Ser Ser Gln Val Ser Gly
              20              25              30
Ser Ile Pro His Gln Tyr Ser Gly Ser Glu Glu Asp Pro Lys Leu Thr
              35              40              45
Ile Asp Glu Arg Lys Gln Lys Arg Met Leu Ser Asn Arg Glu Ser Ala
              50              55              60
Arg Arg Ser Arg Met Arg Lys Gln Gln His Leu Asp Glu Leu Arg Ala
65              70              75              80
Arg Thr Ala His Leu Arg Ala Glu Asn Ser His Met Leu Thr Lys Phe
              85              90              95
Asn Ile Ala Ser Gln Lys Tyr Met Gln Leu
              100              105

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<210> 1104
<211> 162
<212> PRT
<213> Pinus radiata

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<400> 1104
Arg Gly Gln Pro Arg Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe
1              5              10              15
Val Ser Ala Lys Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg
              20              25              30
Gly Glu Asn Ser Glu Leu Arg Val Gly Val Arg Arg Val Met Arg Gln
              35              40              45
Gln Ser Asn Met Pro Ser Ser Val Ile Ser Ser His Ser Met His Leu
              50              55              60
Gly Val Ile Ala Thr Ala Ser His Ala Val Thr Thr Arg Thr Met Phe
65              70              75              80
Thr Val Tyr Tyr Lys Pro Arg Thr Ser Gln Ser Glu Phe Ile Ile Pro
              85              90              95
Tyr Asp Lys Tyr Met Glu Ala Val Asn Ser Asn Leu Ser Val Gly Met
              100              105              110
Arg Phe Lys Met Arg Phe Glu Gly Glu Glu Ala Pro Glu Arg Arg Phe
              115              120              125
Thr Gly Thr Ile Ile Gly Ile Gly Asp Val Asp Pro Ser Arg Trp Pro
              130              135              140

```

Ser Ser Lys Trp Arg Ser Leu Lys Val Gln Trp Asp Glu Thr Cys Ala
 145 150 155 160
 Ile Pro

<210> 1105
 <211> 115
 <212> PRT
 <213> Pinus radiata

<400> 1105
 Met Ala Gln Ser Glu Glu Gln Pro Asn Glu Ala Thr Val Pro Arg Pro
 1 5 10 15
 Ala Asp Ser His Arg Ser Ile Pro Thr Phe Leu Met Lys Thr Tyr
 20 25 30
 Arg Leu Val Asp Asp Pro Ser Leu Asn Asp Ile Ile Ser Trp Asn Glu
 35 40 45
 Asp Gly Thr Thr Phe Ile Val Trp Arg Pro Ala Glu Phe Ala Arg Asp
 50 55 60
 Leu Leu Pro Asn Tyr Phe Lys His Asn Asn Phe Ser Ser Phe Val Arg
 65 70 75 80
 Gln Leu Asn Thr Tyr Gly Phe Arg Lys Ile Val Pro Asp Arg Trp Glu
 85 90 95
 Phe Ala Asn Glu Phe Phe Arg Arg Gly Glu Lys Lys Leu Cys Glu
 100 105 110
 Ile His Arg
 115

<210> 1106
 <211> 37
 <212> PRT
 <213> Pinus radiata

<400> 1106
 Met Gly Arg Ala Pro Cys Cys Thr Lys Val Gly Leu Asn Lys Gly Ala
 1 5 10 15
 Trp Ser Ala Glu Glu Asp Ser Leu Leu Gly Arg Tyr Ile Gln Thr His
 20 25 30
 Gly Glu Gly Asn Trp
 35

<210> 1107
 <211> 187
 <212> PRT
 <213> Pinus radiata

<400> 1107
 Thr Arg Ser Gly Ser Lys Asn Ser Ala Arg Ala Pro Val Ser Gly Phe
 1 5 10 15
 Ser Met Asn Ser Asn Met Gly Val Ser Gly Gly Leu Asp Glu Ser Gly
 20 25 30
 Phe Ser Gln Pro Pro Pro Asn Phe Ala Lys Met Asn Ala Pro Thr Arg
 35 40 45
 Thr Phe Thr Lys Val Tyr Lys Leu Gly Ser Val Gly Arg Ser Val Asp
 50 55 60
 Val Thr Arg Phe Arg Gly Tyr Pro Asp Leu Arg Ala Glu Leu Asp Arg
 65 70 75 80
 Met Phe Gly Leu Glu Gly Gln Leu Glu Asn Pro Arg Ser Ser Trp Gln
 85 90 95
 Leu Val Phe Val Asp Lys Glu Lys Asp Val Leu Leu Leu Gly Asp Asp
 100 105 110

```

Pro Trp Glu Glu Phe Val Asn Asn Val Arg Phe Ile Lys Ile Leu Ser
      115      120      125
Pro Pro Glu Val Gln Gln Met Ser Gln Glu Asp Met Glu Phe Trp Ser
      130      135      140
Ser Ile Pro Thr Gln Gln Gln Thr Ser Ser Ser Ser Asp Asp Cys Val
      145      150      155      160
Ala Arg Asn Ser Ser Arg Asn Ile Arg Ser Val Leu Thr Ser Pro Gly
      165      170      175
Ser Leu Asp Val Leu Ser Val Asp Pro Ile Val
      180      185

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<210> 1108
<211> 130
<212> PRT
<213> Pinus radiata

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<400> 1108
His Asp Asn Glu Trp Lys Phe Arg His Ile Tyr Arg Gly Gln Pro Lys
 1      5      10      15
Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe Val Ser Ala Lys Arg
      20      25      30
Leu Ser Ala Gly Asp Ala Val Leu Phe Ile Arg Asn Glu Lys Gly Gln
      35      40      45
Leu Leu Leu Gly Ile Arg Arg Ala Asn Arg Ser Gln Thr Val Met Pro
      50      55      60
Ser Ser Val Leu Ser Ser Asp Ser Met His Ile Gly Val Leu Ala Ala
      65      70      75      80
Ala Ala His Ala Ala Ser Thr Asn Cys Arg Phe Thr Ile Phe Tyr Asn
      85      90      95
Pro Arg Ala Ser Pro Ser Glu Phe Val Ile Pro Leu Ser Lys Tyr Glu
      100      105      110
Lys Ala Val Tyr His Thr Arg Val Ser Ile Gly Met Arg Phe Arg Met
      115      120      125
Leu Phe
      130

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<210> 1109
<211> 81
<212> PRT
<213> Pinus radiata

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<400> 1109
Met Gly Arg Thr Pro Cys Cys Glu Lys Gly His Thr Asn Lys Gly Ala
 1      5      10      15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
      20      25      30
Gly Glu Gly Arg Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
      35      40      45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro His
      50      55      60
Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Phe Ile Ile Lys
      65      70      75      80
Leu

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<210> 1110
<211> 146
<212> PRT
<213> Pinus radiata

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<400> 1110

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Met Gly Arg Ala Pro Cys Trp Asp Lys Met Gly Val Lys Lys Gly Ala
 1 5 10 15
 Trp Thr Leu Asp Glu Asp Lys Ile Leu Val Asp Tyr Ile Thr Lys His
 20 25 30
 Gly His Gly Asn Trp Arg Ala Leu Pro Lys Gln Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Lys Pro Asp
 50 55 60
 Ile Lys Arg Gly Asn Phe Ser Pro Glu Glu Glu Asp Gln Ile Ile Lys
 65 70 75 80
 Leu His Glu Leu Ile Gly Asn Arg Trp Ser Thr Ile Ala Ser Tyr Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Val Trp Asn Thr His Leu
 100 105 110
 Lys Lys Arg Leu Ala Arg Met Lys Ala Asp Ser Val Ala Val Asp Ala
 115 120 125
 Gln Pro Thr Pro Ala Ser Ser Leu Ala Ser Ser Thr Thr Glu Met Thr
 130 135 140
 Cys His
 145

<210> 1111
 <211> 72
 <212> PRT
 <213> Pinus radiata

<400> 1111
 Cys Ile Glu Ala Asn Gly Gly Gly Ala Pro Gly Arg Ser Leu Pro Lys
 1 5 10 15
 Ala Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile
 20 25 30
 Asn Tyr Leu Arg Pro Asp Asp Val Lys Arg Gly Asn Phe Thr Glu Glu
 35 40 45
 Glu Asp Asp Leu Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp
 50 55 60
 Ser Leu Ile Ala Gly Arg Leu Pro
 65 70

<210> 1112
 <211> 112
 <212> PRT
 <213> Pinus radiata

<400> 1112
 Met Arg Arg Leu Arg Cys Glu Lys Gly Asn Thr Asn Lys Gly Ala Trp
 1 5 10 15
 Thr Gln Gln Glu Asp Ala Arg Leu Ile Ala Tyr Ile Arg Ala His Gly
 20 25 30
 Glu Gly Gly Trp His Ser Leu Pro Arg Ala Ala Gly Leu Leu Arg Cys
 35 40 45
 Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asn Leu
 50 55 60
 Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Asp Leu Ile Ile Lys Leu
 65 70 75 80
 His Asn Leu Leu Gly Asp Lys Trp Ser Leu Ile Ala Gly Arg Leu Pro
 85 90 95
 Gly Arg Met Glu Asp Gln Ile Lys Asn Tyr Trp Asp Thr His Phe Lys
 100 105 110

<210> 1113
 <211> 148

<212> PRT

<213> Pinus radiata

<400> 1113

Gly Lys Glu Val His Ile Ala Glu Pro Asp Gln Val Ser Asp Pro Pro
 1 5 10 15
 Lys Ala Ile Lys Tyr Glu Pro Pro Ala Val Ser Cys Asp Gln Glu Lys
 20 25 30
 Pro Leu Gln Lys Leu Ser Lys Glu Thr Gln Val Lys Gln His Gly Asn
 35 40 45
 Pro Thr Arg Ser Cys Thr Lys Val His Lys Gln Gly Ile Ala Leu Gly
 50 55 60
 Arg Ala Val Asp Leu Thr Lys Phe Glu Gly Tyr Glu Glu Leu Ile Cys
 65 70 75 80
 Glu Leu Glu Arg Met Phe Asn Ile Glu Gly Glu Leu Arg Asn Pro Ser
 85 90 95
 Lys Gly Trp Gln Val Val Tyr Thr Asp Asn Glu Gly Asp Met Met Leu
 100 105 110
 Val Gly Asp Asp Pro Trp Gln Glu Phe Cys Ser Ile Val Arg Lys Ile
 115 120 125
 Phe Ile Tyr Thr Arg Glu Glu Val Glu Lys Met Thr Pro Gln Lys His
 130 135 140
 Ala Lys Leu Gln
 145

<210> 1114

<211> 273

<212> PRT

<213> Pinus radiata

<400> 1114

Glu Thr Gln Ser Ser Asp Asn Asn Tyr Met Val Gly Phe Val Leu Ala
 1 5 10 15
 Asn Val Val Gly Leu Gln Tyr Tyr Thr Gly Thr Ile Asn Gly Arg Glu
 20 25 30
 Met Ile Arg Leu Val Arg Glu Pro Glu Asn Arg Tyr Asp Pro Asn Ala
 35 40 45
 Ile Lys Val Leu Asn Met Ser Gly Gln Gln Val Gly His Ile Glu Arg
 50 55 60
 Ala Val Ala Leu Ala Leu Ala Ser His Val Asp Gln Ser Leu Ile Leu
 65 70 75 80
 Ile Glu Gly Ile Val Ser Arg Ala Leu His Lys Gly Ala Tyr Lys Leu
 85 90 95
 Pro Cys Gln Ile Tyr Ile Phe Ser His Arg Asp Ser Met Gly Met Val
 100 105 110
 Leu Gln Leu Leu Lys Gly Ala Gly Leu Asn Val Ile Thr Ala Glu Asp
 115 120 125
 Gln Glu Phe Leu Thr Ala Glu Ser Ile Ala Ala Lys Glu Ile Tyr Glu
 130 135 140
 Asp Pro Gly Val Lys Glu Val Arg Arg Val Asp Asp Ile Phe Gly Ser
 145 150 155 160
 Leu Asn Asn Pro Lys Lys Arg Gln Ser Met Glu Ala Cys Glu Leu Val
 165 170 175
 Thr Ser Thr Leu Leu Gln His Gln Lys Glu Ala Leu Ala Trp Met Val
 180 185 190
 Gln Arg Glu Asn Ser Ser Glu Leu Pro Phe Trp Asp Val Cys Asp
 195 200 205
 Lys Thr Ser Lys Ser Gln Gln Leu Arg Tyr Lys Asn Val Leu Thr Asn
 210 215 220
 Phe Glu Thr Asn Gly Arg Pro Lys Pro Leu Arg Gly Gly Ile Leu Ala
 225 230 235 240

Asp Asp Met Gly Leu Gly Lys Thr Leu Ser Leu Leu Ser Leu Ile Ala
 245 250 255
 Thr Asn Arg Pro Gly Ala Lys Leu Pro Pro Val Val Asp Ile Ala Pro
 260 265 270
 Ser

<210> 1115
 <211> 129
 <212> PRT
 <213> Pinus radiata

<400> 1115
 Leu Ile Pro Gln His Asn Ala Phe Ser Leu Glu Leu Arg Phe Ser Asp
 1 5 10 15
 Arg Gln Leu Pro Ser Thr Pro Pro Asn Cys Asp Ser Met Phe Pro
 20 25 30
 Ser His Tyr Thr Ala Leu Ala Leu Arg Arg Gln Met Trp Arg Asn Pro
 35 40 45
 Arg Glu Ser Gly Gln Ser His Ser Gln Pro Pro Glu Lys Asp Arg Gly
 50 55 60
 Lys Thr Phe Gly Gln Phe Lys Gly Ile Arg Met Arg Lys Trp Gly Lys
 65 70 75 80
 Trp Val Ser Glu Ile Arg Met Pro Arg Ser Lys Glu Arg Ile Trp Leu
 85 90 95
 Gly Ser Tyr Lys Thr Val Glu Gln Ala Ala Arg Ala Tyr Asp Ala Ala
 100 105 110
 Leu Tyr Cys Leu Arg Gly Pro Asn Ala Lys Phe Asn Phe Pro Asn Ser
 115 120 125
 Val

<210> 1116
 <211> 90
 <212> PRT
 <213> Pinus radiata

<400> 1116
 Met Asp Arg Glu Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1 5 10 15
 Gly Lys Gly Thr Met Arg Arg Lys Lys Lys Thr Ile His Lys Thr Ala
 20 25 30
 Thr Ala Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val
 35 40 45
 Asn Asn Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp His
 50 55 60
 Val Ile His Phe Ala Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn
 65 70 75 80
 Thr Trp Val Gly Ser Gly His Arg Lys Gln
 85 90

<210> 1117
 <211> 33
 <212> PRT
 <213> Pinus radiata

<400> 1117
 Gly Lys Thr Gln Met Lys Leu Lys Arg Glu Arg Asp Gln Gln Ala Arg
 1 5 10 15
 Asp Ala Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu
 20 25 30

Ser

<210> 1118
 <211> 107
 <212> PRT
 <213> Pinus radiata

<400> 1118
 Met Gly Arg Ala Pro Cys Cys Ala Asn Gly Asp Arg Ser Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Thr Gln Tyr Ile Gln Ala His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Gly Phe Ser Glu Asp Glu Asp Asp Leu Ile Leu Lys
 65 70 75 80
 Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Gly His Gln Asn Gln Asn Tyr
 100 105

<210> 1119
 <211> 112
 <212> PRT
 <213> Pinus radiata

<400> 1119
 Arg Lys Ser Asn Val His Ser Phe Cys Lys Thr Leu Thr Ala Ser Asp
 1 5 10 15
 Thr Ser Thr His Gly Gly Phe Ser Val Leu Arg Arg His Ala Asp Glu
 20 25 30
 Cys Leu Pro Pro Leu Asp Met Ser Gln Gln Pro Pro Ser Gln Glu Leu
 35 40 45
 Val Ala Arg Asp Leu His Gly Met Glu Trp Arg Phe Arg His Ile Phe
 50 55 60
 Arg Gly Gln Pro Arg Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe
 65 70 75 80
 Val Ser Ser Lys Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg
 85 90 95
 Gly Glu Ser Gly Glu Leu Arg Val Gly Val Arg Arg Ala Met Arg Gln
 100 105 110

<210> 1120
 <211> 156
 <212> PRT
 <213> Pinus radiata

<400> 1120
 Ala Leu Arg Glu Glu Ala Ile Lys Asn Gly Ala Cys Pro Asn Cys Gly Gly
 1 5 10 15
 Ser Thr Ser Leu Gly Glu Met Pro Gly Phe Asp Glu His His Phe Arg
 20 25 30
 Ile Glu Asn Thr Arg Leu Lys Glu Glu Leu Asp Arg Val Ser Gly Ile
 35 40 45
 Ala Thr Lys Tyr Ile Gly Arg Ser Met Pro His Leu Ala Pro Ile Ala
 50 55 60
 Thr Pro Pro Met Leu Met Ser Ser Leu Glu Leu Ala Met Gly Ser Phe
 65 70 75 80

Gly	Gly	Lys	Gln	Ser	Gln	Pro	Ala	Ala	Pro	Ser	Val	Asp	Phe	Ile	Ser
Gly	Pro	Leu	Ala	Asp	Gly	Pro	Ile	Ile	Asn	Cys	Gly	Thr	Leu	Thr	Asp
Leu	Asp	Lys	Pro	Leu	Ala	Leu	Glu	Leu	Ala	Met	Asn	Gly	Val	Glu	Glu
Leu	Ile	Arg	Met	Ala	Gln	Thr	Asp	Glu	Pro	Leu	Trp	Leu	Lys	Asp	Val
Asn	Ala	Gly	Ser	Val	Lys	Glu	Leu	Phe	Glu	Leu	Gly				

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<210> 1121
<211> 116
<212> PRT
<213> Pinus radiata
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[illegible]

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<210> 1122
<211> 104
<212> PRT
<213> Pinus radiata
```

[illegible]

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<210> 1123
<211> 169
<212> PRT
<213> Pinus radiata
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<400> 1123

Glu Glu Lys Gln Leu Ser Ile Ser Gly Arg Asn Trp Gly Glu Val Asn
 1 5 10 15
 Leu Glu Gly Asn Met Leu Thr Phe Leu Val Gly Ser Lys Pro Ala Phe
 20 25 30
 Glu Val Ser Leu Ala Asp Val Ser Gln Thr Gln Leu Gln Gly Lys Asn
 35 40 45
 Asp Val Val Leu Glu Phe His Val Asp Asp Thr Thr Gly Ala Asn Glu
 50 55 60
 Lys Asp Ser Leu Met Glu Leu Ser Phe His Ile Pro Asn Ser Asn Thr
 65 70 75 80
 Thr Phe Ala Gly Asp Glu Ala Ser Pro Pro Ala Gln Ile Phe Arg Glu
 85 90 95
 Lys Ile Met Ser Met Ala Asp Val Gly Ser Ser Gly Gly Glu Ala Val
 100 105 110
 Ala Leu Phe Glu Asp Ile Ala Ile Leu Thr Pro Arg Gly Arg Tyr Thr
 115 120 125
 Ile Glu Leu His Leu Ser Phe Met Arg Leu Gln Gly Gln Ala Ser Asp
 130 135 140
 Phe Lys Ile Gln Tyr Ser Ser Val Leu Arg Leu Phe Val Leu Pro Lys
 145 150 155 160
 Ser Pro His Thr Leu Val Val Ile Thr
 165

<210> 1124

<211> 124

<212> PRT

<213> Pinus radiata

<400> 1124

Leu Gly His Ser Gln Asn Phe Ser Thr Asp Val Asn Arg Met Pro Asp
 1 5 10 15
 Val Pro Pro Arg Arg Gly Gly His Arg Arg Ala Gln Ser Glu Ile Ala
 20 25 30
 Phe Arg Leu Pro Asp Asp Ile Met Phe Asp Gly Asp Leu Gly Phe Ala
 35 40 45
 Gly Phe Asp Met Pro Thr Val Ser Asp Ala Thr Glu Ala Glu Asp
 50 55 60
 Leu Ile Ser Met Tyr Met Asp Met Glu Lys Leu Thr Ser Phe Gly Glu
 65 70 75 80
 Pro Leu Asn Ser Ala Ala Gly Glu Gly Ser Lys Leu Pro Ser Gly Ala
 85 90 95
 Glu Thr Asn Arg Pro Pro His His Ser Arg Ser Leu Ser Val Asp Ala
 100 105 110
 Val Phe Ser Gly Phe Glu Gly Asn Met Glu Asp Thr
 115 120

<210> 1125

<211> 70

<212> PRT

<213> Pinus radiata

<400> 1125

Met Asp Arg Ser Ser Ser Glu Asp Ser Val Asp Ser Gln Gly Asp Val
 1 5 10 15
 Asn Ala Asn Thr Lys Met Val Phe Ser Glu Asp Glu Lys Asp Leu Ile
 20 25 30
 Ser Arg Leu Tyr Asn Leu Leu Gly Gln Arg Trp Ala Leu Ile Ala Gly
 35 40 45
 Arg Ile Pro Gly Arg Thr Ala Glu Glu Ile Glu Lys Tyr Cys Ser Arg
 50 55 60
 Arg Tyr Ile Ser Glu Tyr

65

70

<210> 1126
 <211> 120
 <212> PRT
 <213> Pinus radiata

<400> 1126
 Gly Gly Glu Ile Arg Ile Leu Arg Gly Phe Phe Val Asn Gln Lys Thr
 1 5 10 15
 Asp Gly Gln Gly Ser Ser Phe Ala Ala Ser Ser Ser Arg Asn Ser Ser
 20 25 30
 Phe Ser Asn Gly Tyr Asp Asn Pro Gln Asn Thr Asn Lys Asn Ser Ser
 35 40 45
 Ser Gly Gly Thr Gly Asp Ala Gly Ser Phe Glu Cys Asn Ile Cys Leu
 50 55 60
 Glu Leu Ala Gln Asp Pro Ile Val Thr Leu Cys Gly His Leu Phe Cys
 65 70 75 80
 Trp Pro Cys Leu Tyr Lys Trp Leu His Gly His Ser Lys Ser Gln Glu
 85 90 95
 Cys Pro Val Cys Lys Ala Leu Val Glu Glu Asp Lys Ile Val Pro Leu
 100 105 110
 Tyr Gly Arg Gly Lys Val Gly Ser
 115 120

<210> 1127
 <211> 233
 <212> PRT
 <213> Pinus radiata

<400> 1127
 Met Gly Ala Pro Lys Gln Lys Trp Thr Ser Glu Glu Glu Gly Ala Leu
 1 5 10 15
 Lys Ala Gly Val Glu Lys Tyr Gly Thr Gly Lys Trp Arg Thr Ile Gln
 20 25 30
 Lys Asp Pro Glu Phe Gly His Cys Leu Ala Ala Arg Ser Asn Val Asp
 35 40 45
 Leu Lys Asp Lys Trp Arg Asn Met Ser Val Ser Ala Ser Gly Gln Gly
 50 55 60
 Ser Arg Asp Lys Val Lys Thr Pro Arg Val Lys Ala Ile Ala Ser Leu
 65 70 75 80
 Pro Tyr Ser Ser Val Thr Ala Glu Ser Thr Ser Val Phe Ser Ile Glu
 85 90 95
 Ala Thr Thr Ser Thr Thr Pro Asp Asn Leu Ile Ser Pro Lys Ser Ser
 100 105 110
 Ser Asn Gly Lys Ile His Ser Pro Arg Tyr Asp Gly Met Ile Leu Glu
 115 120 125
 Ala Leu Thr Ser Met Gln Asp Pro Asn Gly Ile Asp Ile Ala Thr Ile
 130 135 140
 Ala Ser Phe Met Glu Glu Arg His Glu Leu Pro Pro Asn Phe Lys Arg
 145 150 155 160
 Ala Leu Gly Thr Lys Leu Arg Arg Leu Val Ala Gln Glu Lys Val Ile
 165 170 175
 Lys Ile Arg Asn Ser Tyr Lys Leu Lys Asp Met Thr Ser Thr Glu Val
 180 185 190
 Thr Ser Glu Val Leu Gly Ser Ala Ile Pro Ile Asp Asn Ser Met Gln
 195 200 205
 Tyr Ser Asn Ala Phe Thr Asn Thr Ile Asp Thr Phe Ser Val Asp Arg
 210 215 220
 Val Asn Glu Ala Ser Met Ala Ala Ala
 225 230

<210> 1128
 <211> 144
 <212> PRT
 <213> Pinus radiata

<400> 1128
 His Ser Arg Pro Leu Ile Lys Glu Glu Ala Glu Ser Gly Asp Asn Ser
 1 5 10 15
 Ala Asn Ser Ala Asp Val Glu Thr Leu Leu Pro Gln Val Asp Glu Thr
 20 25 30
 Ala Ser Ala Asp Leu Thr Val Phe Pro Gly Phe Val Thr Pro Tyr Val
 35 40 45
 Pro Tyr Gly Phe Pro Ile Trp His Thr Phe Arg Pro Thr Ile Thr Gln
 50 55 60
 Thr Ser Asn Val Tyr Lys Pro Thr Ala Val Met Pro Thr Ala Pro Ile
 65 70 75 80
 Lys Met Asp Glu Cys Thr Gly Leu Ser Gln Leu Ser Leu Gly Gly Val
 85 90 95
 Ala Ala Ala Ser Ala Met Lys Pro Ser Glu Leu Ser Leu Lys Leu His
 100 105 110
 Gly Arg Pro Pro Ser Arg Gln Ser Ala Phe Gln Ala Lys Pro Ser Leu
 115 120 125
 Asn Glu Ser Ser Ser Leu Ser Ser Ser Asn Val Ile Ser Val Val
 130 135 140

<210> 1129
 <211> 187
 <212> PRT
 <213> Pinus radiata

<400> 1129
 His Pro Tyr Met Trp Gly Gly Gln Pro Leu Met Pro Pro Tyr Gly Thr
 1 5 10 15
 Pro Leu Pro Tyr Pro Ala Met Tyr Pro His Gly Gly Ile Tyr Ala His
 20 25 30
 Pro Ser Met Pro Pro Gly Ala Leu Pro Tyr Gly His Tyr Gly Met Pro
 35 40 45
 Ser Pro Gly Asn Ala Glu Val Thr Thr Thr Leu Ala Leu Pro Asn Ala
 50 55 60
 Glu Ala Glu Ala Lys Ser Ser Glu Gly Lys Glu Arg Asn Thr Met Lys
 65 70 75 80
 Arg Ser Lys Gly Ser Leu Gly Ser Leu Gly Met Ile Thr Gly Lys Gly
 85 90 95
 Gly Glu Gly Gly Lys Ala Thr Ser Gly Ser Ala Asn Glu Ala Met Ser
 100 105 110
 Gln Ser Gly Asp Ser Gly Ser Asp Gly Ser Ser Glu Gly Ser Glu Glu
 115 120 125
 Tyr Asn Thr Gln Thr Glu Ser Gln Val Ala Arg Lys Arg Ser Phe Asp
 130 135 140
 Gln Met Ile Val Asp Gly Ala Asn Ala Gln Ser Thr Asn Ile Gln Ser
 145 150 155 160
 Tyr Asn Ser Gln Ala Gly Glu Pro Tyr Val Thr Ser Gly Gly His Ala
 165 170 175
 Met Gly Asn Pro Ile Ser Gln Ala Val Ala Ala
 180 185

<210> 1130
 <211> 80
 <212> PRT
 <213> Pinus radiata

<400> 1130
 Gly Lys Val Thr Ala Ser Gly Lys Val Thr Ser Gly Val Asn Asp Leu
 1 5 10 15
 Phe Trp Glu Gln Phe Leu Thr Glu Thr Pro Gly Ser Ala Thr Asp Thr
 20 25 30
 Gln Glu Ala Glu Ser Lys Ile Gln Glu Thr Arg Thr Lys Asp Gln Asp
 35 40 45
 Glu Arg Leu Pro Glu Asn Gly Lys Cys Trp Ser Asn Lys Gln Thr Leu
 50 55 60
 Asp Gln Leu Thr Glu Gln Met Gly Gln Leu Ala Ser Gly Thr Gln Thr
 65 70 75 80

<210> 1131
 <211> 96
 <212> PRT
 <213> Pinus radiata

<400> 1131
 Met Asn Met Asp Ser Arg Gln Ser Gly Glu Glu Asp Cys Asn Val
 1 5 10 15
 Thr Arg Pro Gly Gly Gly Gly Ile Ser Leu His Val Ser Ser Val
 20 25 30
 Glu Tyr Cys Gln Lys Ser Ala Cys Val Ala His Asp Ile Ser Ser Asp
 35 40 45
 Glu Gln Asp Leu Ile Asn Arg Leu His Asn Leu Leu Gly Asp Arg Trp
 50 55 60
 Ala Leu Ile Ala Gly Arg Leu Pro Trp Arg Arg Arg Glu Glu Ile Glu
 65 70 75 80
 Asn Tyr Cys Lys Met Arg Tyr Thr Ala Thr Thr Ser Ser Ser Arg Ser
 85 90 95

<210> 1132
 <211> 193
 <212> PRT
 <213> Pinus radiata

<400> 1132
 Glu Arg Glu Arg Gly Arg Lys Pro Ala Asn Gly Arg Glu Glu Pro Leu
 1 5 10 15
 Asn His Val Glu Ala Glu Arg Gln Arg Arg Glu Lys Leu Asn Gln Lys
 20 25 30
 Phe Tyr Glu Leu Arg Ala Val Val Pro Asn Val Ser Lys Met Asp Lys
 35 40 45
 Ala Ser Leu Leu Gly Asp Ala Ala Tyr Ile Lys Asp Leu Phe Ser
 50 55 60
 Lys Gln Gln Asp Leu Glu Ser Glu Arg Val Asp Met Gln Val Gln Ile
 65 70 75 80
 Asp Thr Ile Lys Lys Glu Leu Leu Met Asn Ser Leu Lys Leu Ala Ala
 85 90 95
 Lys Glu Ala Lys Asp Leu Ser Ser Ile Asp Leu Lys Gly Phe Ser Gln
 100 105 110
 Gly Lys Phe Pro Gly Leu Asn Ser Glu Val Arg Ile Val Gly Arg Glu
 115 120 125
 Ala Ile Ile Arg Ile Gln Cys Thr Lys His Asn His Pro Val Ala Arg
 130 135 140
 Leu Met Ile Ala Leu Gln Glu Leu Asp Leu Glu Val Leu His Ala Ser
 145 150 155 160
 Ile Ser Thr Val Lys Asp Ser Leu Ile Ile Gln Thr Val Ile Val Lys
 165 170 175
 Met Thr Arg Gly Leu Tyr Thr Glu Asp Gln Leu His Ala Leu Leu Cys

	180	185	190
Lys			
	<210> 1133		
	<211> 88		
	<212> PRT		
	<213> Pinus radiata		
	<400> 1133		
Met	Ala Tyr Asn Arg	Lys His Ala Ala Ala Thr Ser	Pro Asp Ser
1	5	10	15
Ser	Leu Gly Ser Asp Asn Glu Ser	Gly Gly Gly Gly Gly Gly	Gly Gly Gly
	20	25	30
Gly	Lys Gly Gln Ser Thr Lys Asn	Gly Asn Gly Asn Tyr Ile Arg	Glu
	35	40	45
Gln	Asp Arg Leu Leu Pro Ile Ala	Asn Val Gly Arg Ile Met Lys Arg	
	50	55	60
Ala	Leu Pro Gly Asn Ala Lys Ile	Ser Lys Asp Ala Lys Glu Thr Val	
65	70	75	80
Gln	Glu Cys Val Ser Glu Phe Ile		
	85		
	<210> 1134		
	<211> 141		
	<212> PRT		
	<213> Pinus radiata		
	<400> 1134		
Met	Ala Thr Arg Asn	Pro Phe Asp Leu Leu Glu Asp Asp	Asp Asn Gly
1	5	10	15
Asp	Pro Ser Ser Leu Leu Asp Thr	Leu Ala Ala Ala Lys Asp Lys Pro	
	20	25	30
Ala	Ala Val Ala Ala Lys Lys Gln	Gln Pro Ala Val Ser Ala Ser Gly	
	35	40	45
Lys	Leu Pro Thr Lys Pro Leu Pro	Pro Ala Gln Ala Val Lys Glu Ser	
	50	55	60
Arg	Val Ser Pro Asn Glu Gly Gly	Arg Gly Arg Gly Gly Gly Arg Gly	
65	70	75	80
Gly	Arg Gly Phe Gly Asn Arg Glu	Ser Gln Glu Phe Gly Arg Gly Arg	
	85	90	95
Gly	Gly Gly Tyr Asn Val Glu Arg	Asn Phe Asn Arg Glu Asn Asn Ala	
	100	105	110
Tyr	Ser Gly Ser Arg Val Gly Phe	Tyr Asp Asn Asn Ser Asp Leu Ile	
	115	120	125
Pro	Ser Arg Asn Glu Asp Gly Asp	Gly Ala Ser Asn Asp	
	130	135	140
	<210> 1135		
	<211> 43		
	<212> PRT		
	<213> Pinus radiata		
	<400> 1135		
Met	Pro Arg Val Lys Leu Ile Ser	Arg Asn Phe Met Asp Met Val Ala	
1	5	10	15
Ala	Leu Pro Ala Ala Lys Leu Asp	Arg Leu Tyr Asp Lys Ser Leu His	
	20	25	30
Leu	Arg Ser Gly Leu Arg Ser Leu	Thr Pro Val	
	35	40	

<210> 1136
 <211> 48
 <212> PRT
 <213> Pinus radiata

<400> 1136
 Met Ala Glu Glu Met Asp Thr Pro Thr Lys Thr Thr Lys Thr Pro Thr
 1 5 10 15
 Ser Gln Glu Gln Thr Ser Thr Ser Thr Pro Val Ala Tyr Pro Glu Trp
 20 25 30
 Ala Ala Pro Ile Gln Ala Leu Tyr Asn Ser Gly Lys Thr Pro Leu Pro
 35 40 45

<210> 1137
 <211> 190
 <212> PRT
 <213> Pinus radiata

<400> 1137
 Ser Phe Ser Ser Thr Arg Glu Ser Met Glu Arg Arg Asp Gln Ser Pro
 1 5 10 15
 Val Ala Ala Arg His Pro Met Arg Lys His Tyr Arg Gly Val Arg Gln
 20 25 30
 Arg Gln Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro Gln Asn Arg
 35 40 45
 Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Ala Ala Ala Leu
 50 55 60
 Ala Tyr Asp Arg Ala Ala Tyr Arg Trp Arg Gly Glu Cys Ala Arg Leu
 65 70 75 80
 Asn Phe Pro His Leu Phe Ser Lys Lys Tyr Gln Asn Ser Ser Pro Ser
 85 90 95
 Ser Thr Asn Gly Arg Ile Pro Arg Leu Ser Cys Glu Lys Ser Asp Gln
 100 105 110
 Lys Tyr Ala Tyr Asn Gly Asp Pro Val His Thr Asn Val Tyr Lys Gly
 115 120 125
 Pro Pro Ile Arg Ile Thr Ala Tyr Asn Gly Asp Pro Val Pro Ile Asp
 130 135 140
 Val Tyr Arg Ser Asp Pro Val Arg Val Ser Ala Tyr Thr Gly Asp Pro
 145 150 155 160
 Val Arg Ile Ser Ala Tyr Ser Gly Asp Pro Val Gly Asn Thr Val Thr
 165 170 175
 Leu Ala Glu Ser Glu Leu Glu Ser Ser Cys Ser His Glu Ser
 180 185 190

<210> 1138
 <211> 177
 <212> PRT
 <213> Pinus radiata

<400> 1138
 Leu Asp Tyr Met Glu Glu Gln Asn Trp Asp Ile Asn Gly Ala Lys Tyr
 1 5 10 15
 Asp Gly Ser Glu Lys Trp Lys Ala His Ser Ser Glu Gln Lys Asp Leu
 20 25 30
 Gly Thr Ile Pro Thr Lys Val Glu Gly Arg Ile Gly Asn Arg Glu Asn
 35 40 45
 Ser Leu Asp Val Thr Arg Gly Gly Ala Leu Trp Asp Ile Phe Arg Arg
 50 55 60
 Glu Asp Ile Pro Lys Leu Gln Asp Tyr Leu Leu Lys His Cys Gln Asp
 65 70 75 80
 Phe Arg His Ser Arg Asn Val Ser Val Asp Ser Val Val His Pro Ile

85 90 95
 His Asp Gln Thr Phe Tyr Leu Asn Glu Gly His Lys Lys Lys Leu Lys
 100 105 110
 Glu Glu Tyr Gln Val Glu Pro Trp Thr Phe Glu Gln His Leu Gly Glu
 115 120 125
 Ala Val Phe Ile Pro Ala Gly Cys Pro His Gln Val Arg Asn Leu Lys
 130 135 140
 Ser Cys Ile Lys Val Ala Leu Asn Phe Val Ser Pro Glu Asn Leu Gln
 145 150 155 160
 Glu Cys Ile Arg Leu Glu Asp Glu Leu Arg Leu Leu Pro Lys Asn His
 165 170 175
 Arg

<210> 1139
 <211> 148
 <212> PRT
 <213> Pinus radiata

<400> 1139
 Gly Pro Arg Glu Met Thr Glu Glu Glu Arg Glu Thr Lys Lys Ala Ala
 1 5 10 15
 Ser Val Ala Ala Thr Ala Ala Asp Gln Glu Leu Arg Lys Lys Val Leu
 20 25 30
 Arg Asp Leu His Ala Leu Ile Asn Pro Asn Ala Thr Gly Glu Ala Asp
 35 40 45
 Pro Ala Glu Phe Pro Gly Asp Asp Ala Thr Val Asp Gly Glu Val Thr
 50 55 60
 Asp Ala Glu Trp Phe Tyr Leu Val Ser Met Met Lys Ser Phe Gly Asn
 65 70 75 80
 Gly Leu Gly Val Pro Gly Gln Ala Phe Cys Gly Gly Met Pro Ile Trp
 85 90 95
 Ile Ile Gly Ser Glu Lys Leu Gln Ser Tyr Asn Cys Glu Arg Ala Arg
 100 105 110
 Gln Ala Gln Gln Phe Gly Ile Gln Thr Met Val Cys Ile Pro Thr Pro
 115 120 125
 Asn Gly Val Val Glu Leu Gly Ser Thr Asp Leu Asn Pro Gln Asn Trp
 130 135 140
 Asp Leu Ile Gln
 145

<210> 1140
 <211> 341
 <212> PRT
 <213> Pinus radiata

<400> 1140
 Met Cys Gly Gly Ala Ile Ile Lys Glu Phe Ile Pro Ala Asn Arg Ser
 1 5 10 15
 Arg Arg Val Thr Ala Arg Glu Leu Trp Pro Asp Phe Asp Thr Phe Ala
 20 25 30
 Glu Phe Ile Asn Gly Gly Ala Thr Gln Glu Thr Phe Asn Lys Pro Gly
 35 40 45
 Lys Leu Asp Glu Gly Cys Lys Gln Lys Ser Lys Pro Ser Lys Gly Ser
 50 55 60
 Val Lys Thr Gln Gln Glu Phe Cys Ser Gly Phe Glu Gly Gly Arg Ser
 65 70 75 80
 Glu Val Ile Pro Pro Leu Glu Asp Val Glu Gly Ser Thr Pro Thr Ile
 85 90 95
 Gly Gly Arg Lys Arg Lys Asn Val Tyr Arg Gly Ile Arg Glu Arg Pro
 100 105 110

Trp Gly Lys Trp Ala Ala Glu Ile Arg Asp Pro Ser Lys Gly Val Arg
 115 120 125
 Val Trp Leu Gly Thr Phe Asn Thr Ala Glu Glu Ala Ala Lys Ala Tyr
 130 135 140
 Asp Ala Ala Lys Arg Ile Arg Gly Lys Lys Ala Lys Leu Asn Phe
 145 150 155 160
 Ala Asp Asn Ser Cys Ser Val Lys Asn Asp Thr Ser Lys Lys Leu Ser
 165 170 175
 Gly Lys Lys Gly Lys Leu Cys Ser Lys His Pro Ala Leu Leu Glu
 180 185 190
 Gly Phe Asn Ala Ser Cys Lys Val Lys Pro Ser Tyr Ser Ala Asn Pro
 195 200 205
 Asp Leu Leu Gly Gly Tyr Asn Ile Asn Arg Lys Val Lys Ala Ser Leu
 210 215 220
 Ser Gly Val Gly Lys Ser Asp Leu Thr Ile Cys Gly Tyr Asp Asp Met
 225 230 235 240
 Glu Tyr Gly Asp Ser Gly Phe Ser Lys Pro Ser Ala Pro Phe Gln Asn
 245 250 255
 Asn Ser Asn Ala Cys Thr Val Gln Phe Ser Glu His Ser Asn Leu Thr
 260 265 270
 Gln Thr Ser Gln Lys Ser Cys Ser Cys Glu Ile Cys Ser His Asn Tyr
 275 280 285
 Ser Glu Met Ser Asn Val Met Pro Pro Ala Tyr Gly Asn Ala Val Asn
 290 295 300
 Phe Glu Pro Val Gln Thr Ser Asn Pro Gly Gly Tyr Phe Asp Ser Asp
 305 310 315 320
 His Ser Ser Met Ser Phe Glu Gly Ala His Phe Pro Trp Ala Gln Glu
 325 330 335
 Ile Lys Thr Pro Glu
 340

<210> 1141

<211> 181

<212> PRT

<213> Pinus radiata

<400> 1141

Ala Lys Thr Leu His Pro Cys Trp Asp Ala Tyr Gln Leu Glu Asp Glu
 1 5 10 15
 Arg Ala Ser Ala Val Tyr Ile Asn Val Phe Ser Gly Asp Ala Thr Thr
 20 25 30
 Glu Phe Pro Ser Ala Leu Gln Leu Gly Arg Gly Gly Ile Leu Ala Asp
 35 40 45
 Ala Met Gly Leu Gly Lys Thr Val Met Thr Ile Ser Leu Leu Leu Ala
 50 55 60
 Asn Ser Gly Lys Gly Gly Phe Ser Gly Met Asp Thr Val Glu Pro Phe
 65 70 75 80
 Ser Ala Asn Ser Cys Ser Glu Lys Thr Ile Ile His Pro Tyr Asn Ile
 85 90 95
 Gly Val Glu Leu Gly Pro Ser Gln Tyr Thr Asn Lys Thr Gln Gly Thr
 100 105 110
 Ser Met Leu Arg Arg Ser Ser Ser Gly Leu His Lys Gly Gly Asn
 115 120 125
 Leu Ile Val Cys Pro Met Thr Leu Leu Ser Gln Trp Lys Thr Glu Leu
 130 135 140
 Glu Thr His Val Gln Ser Gly Thr Met Ser Val Tyr Val His Tyr Gly
 145 150 155 160
 Gln Ser Arg Thr Lys Asp Val Lys Ser Leu Leu Gln His Asp Val Val
 165 170 175
 Leu Thr Thr Tyr Gly
 180

<210> 1142
 <211> 59
 <212> PRT
 <213> Pinus radiata

<400> 1142
 Met Phe Val Gly Met Met Ser Glu Val Gly Ser Pro Thr Ser Gln Asp
 1 5 10 15
 Ser Arg Asn Ser Glu Asp Gly Glu Arg Glu Asn Cys Ala Val Arg Glu
 20 25 30
 Gln Asp Arg Phe Met Pro Ile Ala Asn Val Ile Arg Ile Met Arg Lys
 35 40 45
 Val Leu Pro Thr His Ala Lys Ile Ser Asp Asp
 50 55

<210> 1143
 <211> 133
 <212> PRT
 <213> Pinus radiata

<400> 1143
 Met Gly Phe Glu Gln Thr Arg Gly Gly Gly Gly Gly Ala Lys Met Thr
 1 5 10 15
 Gln His Gln Val Val Thr Thr Glu Leu Val Arg Gln Ala Thr Glu Arg
 20 25 30
 Leu Arg Lys Leu Cys Arg Thr Gly Val Lys Val Glu Leu Arg Asp Phe
 35 40 45
 Phe Gln Leu Cys Ile Val Leu Ala Lys Ser Ile Asp Ser Ala Val Val
 50 55 60
 Tyr Asn Gln Ile Pro Thr Met Val His Glu Leu Pro Gln Leu Val Arg
 65 70 75 80
 Gln Val Phe Glu Arg Lys Asp Asp Ile Arg Leu Gln Pro Ala Ile Met
 85 90 95
 Val Leu Met Leu Ser Val Lys Asn Ala Cys Arg Ser Gly Trp Phe Arg
 100 105 110
 Val Thr Asp Thr Asp Glu Leu Leu Thr Met Ser Lys Glu Leu Ser Ser
 115 120 125
 Arg Phe Thr Ser Thr
 130

<210> 1144
 <211> 169
 <212> PRT
 <213> Pinus radiata

<400> 1144
 Met Thr Arg Lys Cys Ser His Cys Gly Asn Asn Gly His Asn Ser Arg
 1 5 10 15
 Thr Cys Pro Asn Arg Gly Gly Val Lys Leu Phe Gly Val Arg Leu Thr
 20 25 30
 Asp Gly Pro Ile Arg Lys Ser Ala Ser Met Gly Asn Leu Met Met Met
 35 40 45
 Ser Asn Pro Ser Ser Pro Ala Asp Pro Ser Glu Pro Ala Ser Ala Ala
 50 55 60
 Ala Ala Ala Ala Ala Ala Ala Ser Gly Tyr Leu Ser Asp Gly Leu
 65 70 75 80
 Val Glu Ala Ser Thr Ser Ser Asn Ser Arg Glu Arg Lys Lys Gly Val
 85 90 95
 Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu Gly Leu Gln Lys
 100 105 110

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Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn Phe Val Ile Thr
    115      120      125
Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Ile Arg
    130      135      140
Gln Ser Asn Met Thr Arg Lys Lys Arg Arg Ser Ser Leu Phe Asp Met
    145      150      155      160
Thr Pro Val Ser Phe Phe Phe Leu Ser
    165

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<210> 1145
<211> 103
<212> PRT
<213> Pinus radiata

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<400> 1145
Val Ser Ser Arg His Glu Phe Ala Val Ser Gln Met Ala Tyr Leu Gln
  1      5      10      15
Ala Leu Arg Asn Ala Gly Ala Thr Leu Arg Gln Phe Ala Glu Leu Glu
    20      25      30
Ser Met Glu Leu Gln Lys Thr Ser Pro Tyr Pro His Leu Arg His Tyr
    35      40      45
Arg Val Thr Leu Pro Pro Ser Pro Pro Pro Leu Pro Pro Pro Pro
    50      55      60
Pro Pro Pro Pro Leu Ser Leu Thr Pro Ser Pro Ser Tyr Gly Ser Ala
    65      70      75      80
Thr Phe Pro Ser Ser Ile Pro Val Asn Arg Ser Ile Tyr Arg Cys Pro
    85      90      95
Tyr Gln Gln Cys Ser Pro Ser
    100

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<210> 1146
<211> 153
<212> PRT
<213> Pinus radiata

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<400> 1146
Gln Leu Pro Asp Glu Ala Ile Ala Leu Ala Ala Ala Ser His Ile Glu
  1      5      10      15
Arg Glu Leu Gln Ile Thr Ser Trp Asn Leu Ser Cys Asn Phe Val Ala
    20      25      30
Ser Thr Leu Gln Gly Arg Glu Cys Ile Glu Arg Leu Glu Ile Thr Gly
    35      40      45
Ile Gly Asp Pro Ser Gly Arg Gly Leu Gly Phe Ser Tyr Leu Arg Val
    50      55      60
Ala Pro Lys Pro Pro Ile Ser Ser Ala Leu Val Lys Lys Ala Ala
    65      70      75      80
Ala Ala Arg Gly Gly Ser Ala Val Thr Gly Thr Asp Ala Asp Leu Arg
    85      90      95
Arg Leu Ser Met Asp Ala Ala Arg Glu Val Leu Leu Lys Phe Asn Val
    100      105      110
Asp Glu Glu Gln Ile Glu Lys Met Thr Arg Trp His Arg Ile Ala Met
    115      120      125
Val Arg Lys Leu Ser Ser Glu Gln Ala Ala Ser Gly Val Lys Val Asp
    130      135      140
Ala Thr Ala Leu Asn Lys Phe Ala Arg
    145      150

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<210> 1147
<211> 73
<212> PRT
<213> Pinus radiata

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<400> 1147
 Met Lys Ser Pro Ser Thr Ser Cys Leu Ser His Pro Val Glu Gly Glu
 1 5 10 15
 Gln Lys Ser Ile Asn Ser Glu Leu Trp His Ala Cys Ala Gly Pro Leu
 20 25 30
 Val Ser Leu Pro Ser Val Gly Ser Val Val Tyr Tyr Phe Pro Gln Gly
 35 40 45
 His Ser Glu Gln Val Ala Ala Ser Thr Gln Lys Val Ala Asp Thr His
 50 55 60
 Ile Pro Asn Tyr Pro Asn Leu Pro Tyr
 65 70

<210> 1148
 <211> 213
 <212> PRT
 <213> Pinus radiata

<400> 1148
 Leu Lys Val Gln Trp Asp Glu Ile Ser Ala Ile Ala Arg Pro Glu Arg
 1 5 10 15
 Val Ser Pro Trp Lys Leu Glu Pro Ser Leu Thr Pro Val Ala Val Asn
 20 25 30
 Pro Leu Pro Val Ala Arg Gly Lys Arg Pro Arg Pro Asn Ile Leu Pro
 35 40 45
 Ser Ser Ser Asp Leu Ser Val His Asp Lys Ala Pro Val Asp Ser Thr
 50 55 60
 Gln Val His Arg Phe Pro Arg Val Leu Gln Gly Gln Glu Val Met Thr
 65 70 75 80
 Leu Gly Gly Ser Leu Gly Asp Gly Glu Leu Glu Ser Gly Gln Lys Met
 85 90 95
 Val Ala Trp Gly Gly Ser Lys Leu Asp Asp Val Lys Ala Glu Gly Met
 100 105 110
 Gly Cys Gln Arg Arg Leu Val Ser Glu Asn Trp Met Pro Pro Leu Arg
 115 120 125
 His Asp Ser Leu Tyr Ser Asp Thr Phe Ser Ser Phe Gln Pro Val Gly
 130 135 140
 Glu Val Gln Glu Phe Arg Gly Ser Leu Thr Asn Ser Ile Leu Glu Asp
 145 150 155 160
 Gly Gln Gln Pro Lys Leu Ser Arg Lys Gln Phe Gln Asp Gln Glu Gly
 165 170 175
 Lys Ile Val Asp Gly Ser Gly Leu Trp Ser Met Ser Phe Pro Asn Ser
 180 185 190
 Leu Gln Leu Cys Glu Ser Asn Arg Lys Met Ser Ala Thr Ser Ala Ala
 195 200 205
 Gln Ser His Lys Gln
 210

<210> 1149
 <211> 217
 <212> PRT
 <213> Pinus radiata

<400> 1149
 Glu Leu Thr Ser Asp Ser His Arg Gln Ala Thr Leu Gln Leu Glu Ala
 1 5 10 15
 Glu Val Thr Ala Trp His Ile Ser Phe Cys Ser Leu Ile Lys Ser Gln
 20 25 30
 Gln Asp Tyr Ile Cys Ala Leu Tyr Glu Trp Ala Arg Leu Ser Leu Val
 35 40 45
 Gln Leu Gly Asn Glu Ala Gln Trp Glu Arg Gly Asn Arg Pro Pro Ile

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      50              55              60
Tyr Thr Leu Cys Asp Val Trp Gln Gln Val Leu Lys Arg Leu Pro Asp
65              70              75              80
Lys Val Ala Ser Glu Ser Ile Lys Ser Phe Ile Ser Val Val His Ala
      85              90              95
Ile Val Met Gln Gln Ala Asp Glu Gln Lys Arg Lys Lys Lys Ala Glu
      100              105              110
Asn Ile Ser Arg Glu Leu Gln Lys Lys Met Ile Ala Leu Arg Asn Ile
      115              120              125
Glu Lys Lys Tyr Tyr Ser Ser Tyr Ser Ile Pro Ala Arg Ala Asp Ala
      130              135              140
Thr Thr Glu Ser Gln Phe Glu Leu Gly His Thr Asp Pro Leu Ala Glu
145              150              155              160
Lys Arg Ala Glu Ile Glu Ile Tyr Lys Arg Arg Leu Glu Asp Glu Lys
      165              170              175
Ala Asn Tyr Ser Lys Ser Ala Arg Gly Thr Arg Glu Met Thr Leu Asn
      180              185              190
Asn Ile Gln Thr Gly Leu Pro Gly Leu Phe Gln Ala Leu Ser Ser Phe
      195              200              205
Ser Ser Val Cys Ala Ser Ser Phe Glu
210              215

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<210> 1150
<211> 33
<212> PRT
<213> Pinus radiata

```

```

<400> 1150
Met Ala Met Gly Glu Ala Glu Arg Ile Thr Gly Pro Trp Ser Pro Glu
1              5              10              15
Glu Asp Thr Ser Leu His Lys Leu Val Glu Lys Ser Gly Pro Arg Asn
      20              25              30
Trp

```

```

<210> 1151
<211> 127
<212> PRT
<213> Pinus radiata

```

```

<400> 1151
Trp Arg Pro Ala Lys Phe Ala Arg Asn Leu Leu Pro Asn Tyr Phe Lys
1              5              10              15
Pro Asn Asn Phe Ser Ser Phe Gly Arg Gln Leu Asn Thr Tyr Gly Phe
      20              25              30
Arg Lys Ile Val Pro Asp Arg Trp Glu Phe Ser Asn Glu Phe Phe Arg
      35              40              45
Lys Gly Glu Lys Gln Leu Leu Ser Glu Ile His Arg Arg Lys Gly Leu
      50              55              60
Ile Gln Pro Pro Pro Pro Pro Glu Asn Arg Ser Ile Ser Pro Ser Asn
65              70              75              80
Ser Gly Asp Glu Gln Thr Trp Ser Ser Thr Ser Ser Pro Asn Ser Ser
      85              90              95
Thr Gly Val Asp Ala Leu Ser His Lys Asn Ala Ile Glu Glu Asn Glu
      100              105              110
Lys Leu Arg Lys Glu Asn Leu Leu Val Ser Glu Leu Thr Gln
      115              120              125

```

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<210> 1152
<211> 104
<212> PRT

```


<213> Pinus radiata

<400> 1152

```

Pro His Gly Leu Gln His His Ser Ser Asp Asp Ala Asn Gly Asp Gly
1      5      10
Asp Lys Arg Ile Gly Val Glu Thr Gly Ser Ser Val Cys Pro Glu Leu
20      25      30
Trp His Ala Cys Ala Gly Pro Leu Ile Ser Leu Pro Pro Lys Gly Ser
35      40      45
Arg Val Val Tyr Phe Pro Gln Gly His Leu Glu Gln Ile Ala Asp Asn
50      55      60
Glu Leu His Arg Gly Gly Arg Gly Ser Phe Leu Asn Ile Asn His Ala
65      70      75
Ala Ala Pro Met Ala Glu Glu Ala Ser Ser Ala Ala Ala Leu Asn Ile
85      90      95
Pro Pro Ser Phe Ile Ser Gln Pro
100

```

<210> 1153

<211> 146

<212> PRT

<213> Pinus radiata

<400> 1153

```

Glu Thr Leu Thr Leu Leu Lys Ile Arg Ser Glu Met Asp Ser Lys Phe
1      5      10
Arg Glu Ala Thr His Lys Gly Pro Leu Trp Asp Glu Val Ser Arg Ala
20      25      30
Leu Ala Glu His Gly Tyr Gln Arg Ser Ser Lys Lys Cys Arg Glu Lys
35      40      45
Phe Glu Asn Leu Tyr Lys Tyr Tyr Lys Lys Thr Lys Glu Gly Lys Ala
50      55      60
Gly Arg Gln Asp Gly Lys His Tyr Arg Phe Phe Ser Gln Leu Glu Ala
65      70      75
Leu Tyr Gly Gly Thr Thr Ile Asp Ala Ala Asp Ser Cys Phe Gly Val
85      90      95
Thr Thr Arg Thr Asn Leu Thr Glu Ser Pro Gly Leu Asp Phe Asn Gly
100      105      110
Asp Gly Ala Ser Gln Lys Tyr Ala Asp Thr His His Asn Ser Glu Gly
115      120      125
Phe Ser Leu Ser Ser Asp Ser Ser Ser Asp Asp Glu Tyr Ser His Asp
130      135      140
Ile Gln
145

```

<210> 1154

<211> 105

<212> PRT

<213> Pinus radiata

<400> 1154

```

Ile Phe Tyr Arg Leu His Cys Asn Leu Gly Glu Lys Ser Asn Lys Ile
1      5      10
Tyr Ile Cys Leu Phe Thr Met Glu Leu Ala Asp Glu His Ser Ile Leu
20      25      30
Arg Tyr Lys Lys Pro Lys Leu Ser Lys Asn Val Val Ser Glu Arg Arg
35      40      45
Arg Arg Gln Lys Met Asn Lys Leu Leu Tyr Thr Leu Arg Ala Leu Val
50      55      60
Pro Asn Ile Ser Lys Met Asp Lys Ala Ser Ile Leu Ala Asp Ala Ile
65      70      75      80

```

Glu Tyr Val Glu Lys Leu Lys Gln Gln Val Glu Arg Ala Glu Ser Asp
 85 90 95
 Val Gln Ser Thr Asn Val Ser Ala Leu
 100 105

<210> 1155
 <211> 83
 <212> PRT
 <213> Pinus radiata

<400> 1155
 Arg Glu Phe Asn Ile Asn Ala Asp Val Tyr Ala Gln Asp Ser Ile Glu
 1 5 10 15
 Leu Leu Lys Gln Ser Gly Ile Asp Phe Glu Lys Asn Glu Glu Lys Gly
 20 25 30
 Ile Asp Ser His Arg Phe Gly Glu Leu Met Ser Ser Gly Val Val
 35 40 45
 Leu Asn Glu Asn Val Asn Trp Ile Thr Phe His Ser Gly Tyr Asp Phe
 50 55 60
 Gly Tyr Leu Leu Lys Leu Leu Thr Cys Gln Asn Leu Pro Pro Glu Glu
 65 70 75 80
 Ser Asp Phe

<210> 1156
 <211> 170
 <212> PRT
 <213> Pinus radiata

<400> 1156
 Met Ala Asn Arg Ser Leu Trp Gly Gly Ser Asp Phe Asp Tyr Glu Asn
 1 5 10 15
 Glu Ala Asp Thr Arg Lys Gly Pro Trp Thr Val Glu Glu Asp Met Gln
 20 25 30
 Leu Gly Ile Val Asn Leu His Gly Glu Gly Arg Trp Asn Phe Leu Ala
 35 40 45
 Arg Ala Ser Gly Leu Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp
 50 55 60
 Val Asn Tyr Leu Arg Pro Asp Leu Lys Arg Ser Lys Ile Thr Pro Glu
 65 70 75 80
 Glu Glu Arg Leu Ile Ile Glu Leu His Arg Arg Trp Gly Asn Arg Trp
 85 90 95
 Ser Arg Ile Ala Gln Ser Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys
 100 105 110
 Asn Phe Trp Arg Thr Arg Met Lys Gly Lys Leu Asn Ser Glu Thr Gln
 115 120 125
 Lys Asp Ile Ala Gly Val Asp Ala Asp Asp Gly Val Gln Phe Glu Ser
 130 135 140
 Glu Leu Gly Ser Cys Arg Leu Pro Val Ile Ser Ser His Ala Leu Pro
 145 150 155 160
 Glu Val Asp Val Ala Glu Pro Ser Ser Thr
 165 170

<210> 1157
 <211> 119
 <212> PRT
 <213> Pinus radiata

<400> 1157
 Gly Thr Val Gly Arg Lys Arg Arg Arg Ile His Arg Ser Ser Ile Gly
 1 5 10 15

Val Thr Gly Gly Arg Gly Leu Arg His Phe Ser Met Lys Val Cys Lys
 20 25
 Lys Val Glu Ser Lys Gly Trp Thr Thr Tyr Asn Glu Val Ala Ser Glu
 35 40 45
 Leu Val Ala Glu Phe Val Asn Pro Asn Ser Thr His Leu Ser Gln Asp
 50 55 60
 Gln Gln Gln Phe Asp Glu Lys Asn Ile Arg Arg Arg Val Tyr Asp Ala
 65 70 75 80
 Leu Asn Val Leu Met Ala Met Asp Ile Ile Ser Lys Glu Lys Lys Glu
 85 90 95
 Ile Arg Trp Lys Gly Leu Pro Thr Thr Asn Leu Ser Asp Ile Glu Arg
 100 105 110
 Leu Lys Thr Glu Arg Lys Arg
 115

<210> 1158
 <211> 97
 <212> PRT
 <213> Pinus radiata

<400> 1158
 Cys Pro Arg Ala Phe Ala Arg Ala Tyr Asn Leu Lys Thr His Met Ala
 1 5 10 15
 Thr His Asp Pro Asn Arg Leu Lys Pro His Val Cys Pro His Arg Ser
 20 25 30
 Cys Ala Arg Ser Phe Ser Arg Lys His Asp Leu Gly Arg His Leu Val
 35 40 45
 Ser Ile His Arg Asp Asp Ser Val Val Ser Thr Pro Ser Ala Ser Met
 50 55 60
 Lys Ser Ile Gly Val Asp Ser Gly Arg Arg Ser Trp Cys Asp Asn Cys
 65 70 75 80
 Gly Lys Gly Thr Ile Gly Ala Ser Cys Gln Cys Ser Cys Ala Asp Ile
 85 90 95
 Lys

<210> 1159
 <211> 162
 <212> PRT
 <213> Pinus radiata

<400> 1159
 His Ala Pro Ile Phe Cys Arg Val Ala Arg Asn Phe Gln Leu Arg Val
 1 5 10 15
 Ile Leu Lys Glu Asn Arg Arg Arg Glu Thr Phe Asp Gly Phe Leu Arg
 20 25 30
 Glu Asp His Glu Lys Val Ser Gln Leu Val Thr Gln His Tyr Lys Val
 35 40 45
 Gln Leu Glu Thr Lys Glu Ile Ser Val Lys Gly Trp Asn Trp Gly Ser
 50 55 60
 Thr Asp Val Gln Gly Asn Asp Leu Ala Phe Val Val Ala Asn Arg Thr
 65 70 75 80
 Ala Phe Glu Val Pro Leu Arg Ser Ile Thr Asn Ser Asn Ile Ala Gly
 85 90 95
 Arg Thr Glu Val Ser Leu Glu Phe Ser Thr Ala Pro Ala Pro Ser Ala
 100 105 110
 Ser Lys Ser Lys Lys Gly Arg Pro Asp Glu Leu Thr Glu Ile Arg Phe
 115 120 125
 Tyr Val Pro Gly Thr His Thr Lys Asp Asp Asp Asp Glu Ala Asp Ile
 130 135 140
 Thr Lys Asp Asp Glu Glu Val Ser Ala Ala Gln Ala Phe His Asp Met

<211> 48
 <212> PRT
 <213> Pinus radiata

<400> 1162
 Phe Leu Glu Ala Leu Glu Lys Arg Glu Glu Asp Arg Met Met Arg Glu
 1 5 10 15
 Glu Ala Trp Lys Arg Gln Glu Met Ala Arg Leu Asn Lys Asp Gln Glu
 20 25 30
 Leu Arg Ser Gln Glu Arg Ser Met Ala Ala Ser Arg Asp Leu Ala Leu
 35 40 45

<210> 1163
 <211> 255
 <212> PRT
 <213> Pinus radiata

<400> 1163
 Val Ala Leu Ser Asn Asn Pro Leu Ile Phe Ser Ala Lys Val Glu Asn
 1 5 10 15
 Gly Thr Pro Ser Tyr Asp Gly Leu Lys His Ala Asn Thr Asn Pro Met
 20 25 30
 Pro Phe Ser Gly Leu Gly Asn Val Ser Met Gly Pro Leu Phe Tyr Gln
 35 40 45
 Ala Asn Pro Ile Gln Arg Val Lys Arg Val Arg Asp Thr Ser Phe Ile
 50 55 60
 Met Gly Pro Pro Ser Ser Pro Phe Gly Arg Met Gly Val Asn Gly His
 65 70 75 80
 Met Gly Met Asn Asp Val Ser Lys Ser Leu Gln Pro Gly Phe Lys Ala
 85 90 95
 Arg Val Pro Tyr Pro Leu Gln Ala Ala Arg Ser Asp Ser Phe Val Ala
 100 105 110
 Gln Gly Cys Phe Pro Tyr Asp Pro Asn Leu Ser Ser Thr Ser Asn Leu
 115 120 125
 Pro Leu Gly Gly Phe Ser Ser Gly Ser His Ala Val Met Asn Gly Thr
 130 135 140
 Phe Ser Ser Ser Arg Leu Phe Ser Gly Gln Lys Leu Glu Leu Pro Ser
 145 150 155 160
 Ser Gln Phe Ala Glu Ser Val Gln Thr Ala Gly Ser Ser Ile Asn Pro
 165 170 175
 Val Leu Asn Arg Ser Thr Pro Leu Leu Leu Pro Pro Val Pro Thr Gln
 180 185 190
 Thr Ile Asn Gln Val Asp Tyr Ser Phe Ser Thr Pro Lys Asn Ser Gly
 195 200 205
 Leu Leu Glu Ser Met Phe Gln Glu Ala Gln Thr Met Gly Gly Val Lys
 210 215 220
 Ala His Ser Ser Ser Asn Ser Ser Ile Asp Leu Gln Gly Gly Ser Lys
 225 230 235 240
 Ser Ser Ile Ser Asn Pro Leu Asn Asn Gly Phe Leu Cys Arg Ser
 245 250 255

<210> 1164
 <211> 147
 <212> PRT
 <213> Pinus radiata

<400> 1164
 Ile Arg Met Glu Glu Pro Leu Gln Ile Ile Asn Ser Ser Pro Ile Gln
 1 5 10 15
 Gln Gln His Asp His Asp Asp Asp Asp His Gly His Gly His Glu Glu
 20 25 30

Glu Val Ile Pro His Pro Leu Leu Pro Pro Pro Gly Asp Thr Cys Ile
 35 40 45
 Val Pro Tyr Ile Met Pro Val Ser Thr Ser Thr Ala Glu Lys His Pro
 50 55 60
 Pro Gln Pro Thr Asn Ile Ala Phe Asn Gly Pro Glu Thr Glu Glu Asp
 65 70 75 80
 Asp Lys Lys Arg Asp Arg Glu His Lys Lys Arg Ser Lys Asn Trp Thr
 85 90 95
 Arg Val Glu Thr Leu Lys Leu Ile Lys Leu Arg Thr Glu Phe Glu Pro
 100 105 110
 Arg Phe Ser Arg Ser Gly Arg Lys Thr Glu Leu Trp Asp Glu Ile Ala
 115 120 125
 Glu Ser Leu Arg Lys Glu Gln Phe Phe Arg Asp Ala Gln Gln Cys Arg
 130 135 140
 Asp Lys Trp
 145

<210> 1165

<211> 202

<212> PRT

<213> Pinus radiata

<400> 1165

Met Asp Gln Gln Gln Pro Thr Ile Pro Ala Leu Pro Gln Val Gly Tyr
 1 5 10 15
 Gly Thr Asn Pro Tyr Ile Ala Pro Pro Ile Gly Gly Pro Pro His Pro
 20 25 30
 Gln Leu Ala Ser Tyr His Gln Gln Leu Gln Ala Phe Trp Gly Asn Gln
 35 40 45
 Met Arg Glu Val Glu Gln Ala Gln Asp Phe Lys Thr His Ser Leu Pro
 50 55 60
 Leu Ala Arg Ile Lys Lys Ile Met Lys Ala Asp Glu Asp Val Lys Met
 65 70 75 80
 Ile Ser Ala Glu Ala Pro Val Val Phe Ala Lys Ala Cys Glu Met Phe
 85 90 95
 Ile Leu Glu Leu Thr Leu Arg Ser Trp Ile His Thr Glu Glu Asn Lys
 100 105 110
 Arg Arg Thr Leu Gln Lys Asn Asp Ile Ala Ala Ala Ile Gly Arg Thr
 115 120 125
 Asp Ile Phe Asp Phe Leu Val Asp Ile Val Pro Arg Asp Glu Phe Lys
 130 135 140
 Asp Glu Gly Leu Val Ile Pro Arg Ala Ala Gly Ala Val Pro Phe Met
 145 150 155 160
 Gly Pro Gly Asp Asn Val Pro Ser Tyr Tyr Tyr Val Ala Gln Gln Ala
 165 170 175
 Pro Asn Val Ala Ala Tyr Ala Pro Pro Thr Gln Gln Met Arg Ser Lys
 180 185 190
 Ala Pro Ala Pro Pro Pro His Gly Ser Ser
 195 200

<210> 1166

<211> 143

<212> PRT

<213> Pinus radiata

<400> 1166

Gln Gly Ser Leu Thr Leu Pro Arg Thr Leu Ser Arg Arg Thr Val Asp
 1 5 10 15
 Asp Val Trp Arg Glu Ile His Lys Glu Asn Ile Asp Gly Asn Gly Asn
 20 25 30
 Ala Pro Ala Asn Gln Ala Arg Gln Pro Thr Phe Gly Glu Met Thr Leu

```

      35              40              45
Glu Asp Phe Leu Val Lys Ala Gly Val Val Arg Glu Asp Ala Glu Gln
  50              55              60
Gly Asp Gly Gln Ser Phe Gly Ala Phe Arg Asn Ala Leu Asp Gly Glu
  65              70              75              80
Phe Val Ala Asn Leu Ala Glu Arg Asn Gly Asp Asn Arg Leu Gly Ile
      85              90              95
Gly Asn Ser Leu Gly Leu Gly Phe Gly Glu Arg Gly His Arg Asn Gly
  100              105              110
Glu Val Gly Ser Asn Lys Ser Gly Ala Gly Gly Val Pro Gly Leu Ser
  115              120              125
Leu Ser Pro Thr Asn Val Phe Leu Ile Met Leu Pro Trp Ile Trp
  130              135              140

```

<210> 1167
 <211> 90
 <212> PRT
 <213> Pinus radiata

```

      <400> 1167
Phe Gln Arg Arg Lys Lys Lys Ser Ile Gly Arg Gly Cys Leu Lys Thr
  1              5              10              15
Ser Ile Asn Asp Val Glu Gln Leu Lys Ala Glu Lys Leu Leu Lys
  20              25              30
Ser Arg Ile Glu Lys Lys Ala Ser Tyr Phe His Glu Leu Glu Gln
  35              40              45
Ile Ile Gly Leu Gln Asn Leu Val Lys Arg Asn Glu His Arg Tyr Ser
  50              55              60
Ser Gly Asn Thr Pro Ser Gly Gly Val Ser Leu Pro Phe Ile Leu Val
  65              70              75              80
Gln Thr His Pro Arg Ala Thr Val Glu Ile
      85              90

```

<210> 1168
 <211> 105
 <212> PRT
 <213> Pinus radiata

```

      <400> 1168
Gly Ile Arg Arg Ala Thr Arg Gln Lys Ser Gly Ile Leu Ser Ser Val
  1              5              10              15
Leu Ser Asn Gln Asn Ala His Leu Ser Val Leu Ala Ala Ala Ala Ser
  20              25              30
Ala Val Ala Thr Lys Ser Met Phe His Val Phe Tyr Asn Pro Arg Thr
  35              40              45
Ser Pro Ala Glu Phe Ile Ile Pro Tyr Gln Lys Tyr Val Lys Ser Cys
  50              55              60
Lys Gln Pro Leu Ser Ile Gly Met Arg Phe Lys Met Arg Phe Glu Thr
  65              70              75              80
Glu Asp Thr Ala Glu Arg Arg Tyr Thr Gly Met Ile Thr Ala Ile Gly
      85              90              95
Asp Ala Asp Pro Ala Arg Trp Pro Gly
  100              105

```

<210> 1169
 <211> 106
 <212> PRT
 <213> Pinus radiata

```

      <400> 1169
Gln Asp Thr His Ser Glu Pro Met Ala Met Glu Met Gly Leu Val Ile

```

```

      1           5           10           15
Asp Gly Asp Arg Phe Ser Ser Glu Gly Asp Gly Asp Ile Met Leu Asp
      20           25           30
Gly Glu Asp Leu Leu Pro Glu Ile Asn Asp Met Phe Trp Glu Gln Phe
      35           40           45
Leu Ala Glu Ser Ala Thr Ser Gly Gly Thr Glu Glu Ala Glu Ser Ala
      50           55           60
Ala Gln Glu Ser Leu Thr Lys Asp Gln Asp Glu Lys Pro Ser Glu Asn
      65           70           75           80
Gly Asn Trp Trp Lys Lys Asn Gln Asn Met Asp Asn Leu Thr Glu Gln
      85           90           95
Met Gly Gln Leu Ala Ser Glu Ser Asn Pro
      100           105

```

<210> 1170

<211> 144

<212> PRT

<213> Pinus radiata

```

      <400> 1170
Asp Gly Ala Val Arg Asp Ala Gly Arg Leu Val Pro Ala Pro Phe Leu
      1           5           10           15
Val Lys Met Tyr Arg Leu Val Asp Asp Pro Ser Thr Asn His Ile Val
      20           25           30
Ser Trp Gly Glu Asn Asn Asn Ser Phe Val Val Trp Arg Pro Lys Glu
      35           40           45
Phe Ser Ala Ser Val Leu Pro Cys Tyr Phe Asn His Ala Asn Phe Ser
      50           55           60
Ser Phe Val Arg Gln Leu Asn Asn Tyr Gly Phe Arg Lys Thr Phe Arg
      65           70           75           80
Gly Gln Cys Glu Phe Ser Asn Lys Leu Phe Glu Lys Gly Lys Gln Tyr
      85           90           95
Leu Leu Cys His Ile His Arg Arg Arg Ala Ser Asn Ser Ser Pro Met
      100           105           110
Pro Met Glu Tyr Gly Lys Ser Ser Leu Leu Phe Pro Ile Ile Leu Pro
      115           120           125
Thr Gln His Ser Asn Val Leu Ala Ala Pro Leu Pro Ser Ser Leu Ser
      130           135           140

```

<210> 1171

<211> 62

<212> PRT

<213> Pinus radiata

```

      <400> 1171
Lys Glu Arg Ile Leu Thr Glu Glu Asn Leu Phe Leu Arg Lys Lys Cys
      1           5           10           15
Gly Asp Glu His Val Asp Cys Ser Ala Phe Arg Thr Pro Pro Ala Gln
      20           25           30
Leu Arg Ser Ile Gln Asn Ile Asp Val Glu Thr Gln Leu Val Ile Arg
      35           40           45
Pro Pro Thr Val Gln Gln His Pro Asp Val Asp Ser Pro Arg
      50           55           60

```

<210> 1172

<211> 88

<212> PRT

<213> Pinus radiata

```

      <400> 1172
Asp Pro Asn Ala Pro Lys Lys Ala Met Thr Gly Phe Met Phe Phe Ser

```



```

      1           5           10           15
Gln Val Glu Arg Glu Asn Leu Lys Lys Ser Asp Pro Gly Met Ala Phe
      20           25           30
Thr Asp Val Gly Arg Thr Leu Gly Glu Arg Trp Lys Lys Met Ser Ala
      35           40           45
Glu Glu Lys Ala Pro Tyr Glu Ser Lys Ala Arg Ala Asp Lys Glu Arg
      50           55           60
Tyr Lys Glu Ala Met Ala Asp Tyr Lys Ser Gly Pro Thr Asn Val Asp
      65           70           75           80
Ser Gly Asn Glu Ser Asp Ser Glu
      85

```

<210> 1173

<211> 106

<212> PRT

<213> Pinus radiata

```

      <400> 1173
Leu Leu Phe Gly Val Asn Ile Asp Ser Ser Ser Leu Ile Val Pro Asn
      1           5           10           15
Thr Val Ser Asn Met Arg Ser Ile Gly Ser Ser Thr Asp Ala Val Met
      20           25           30
Gln Phe Gly Val Ser Asn Tyr Leu Asn Ala Pro Pro Cys Ala Ser Gly
      35           40           45
Ser Asn Ile Ser Leu Asn Ser Asp Ile Ser Ala Ser Ala Cys Leu Asp
      50           55           60
Glu Ser Gly Leu Leu Pro Ala Glu Asn Leu Gly Gln Met Asn Ala
      65           70           75           80
Pro Thr Arg Thr Phe Ile Lys Val Tyr Lys Gln Gly Ser Val Gly Arg
      85           90           95
Ser Leu Asp Ile Ser Arg Phe Ser Ser Tyr
      100           105

```

<210> 1174

<211> 108

<212> PRT

<213> Pinus radiata

```

      <400> 1174
Met Ala Thr Thr Arg His Gln Arg Ser Pro Asp Ser Ser Pro Arg Ser
      1           5           10           15
Glu Asp Glu Ser Gly Ala His Thr Tyr Ser Asn Gln Asp Gly Ser Val
      20           25           30
Lys Glu Gln Asp Arg Phe Leu Pro Ile Ala Asn Val Ser Arg Ile Met
      35           40           45
Lys Lys Ala Leu Pro Ala Asn Ala Lys Ile Ser Lys Asp Ala Lys Glu
      50           55           60
Thr Val Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Ile Thr Gly Glu
      65           70           75           80
Ala Ser Asp Lys Cys Gln Arg Glu Lys Lys Lys Thr Ile Asn Gly Asp
      85           90           95
Asp Leu Leu Trp Ala Met Gly Thr Leu Gly Phe Glu
      100           105

```

<210> 1175

<211> 137

<212> PRT

<213> Pinus radiata

```

      <400> 1175
Lys Ser Asp Tyr Arg Ser Asp Asp Glu Gly Gly Gly Thr Val Arg

```

```

      1           5           10           15
Glu Gly Lys Asp Leu Gln Thr Ser Asn Phe Ile Asp Tyr Phe Gly Gln
      20           25           30
Ser Asn His Thr Glu Glu Ala Glu Asn Glu His Asp Ala Ser Val Asp
      35           40           45
Thr Lys Gly Pro Leu Glu Ser Ser Asn Glu Val Gly His Pro Thr Thr
      50           55           60
Tyr Pro Glu Ser Ser Ser Leu Ser Ala Gln Gly Ser Glu Pro Arg Val
      65           70           75           80
Phe Ser Cys Asn Tyr Cys Gln Arg Lys Phe Tyr Ser Ser Gln Ala Leu
      85           90           95
Gly Gly His Gln Asn Ala His Lys Arg Glu Arg Thr Leu Ala Lys Arg
      100          105          110
Gly Gln Arg Ile Gly Ala Phe Gln His Arg Tyr Ile Ser Met Ala Ser
      115          120          125
Leu Pro Leu His Gly Ser Thr Glu Ser
      130          135

```

<210> 1176

<211> 206

<212> PRT

<213> Pinus radiata

```

      <400> 1176
Ser Arg Gly Lys Ala Leu Lys Leu Phe Gly Phe Glu Phe Arg Gly Ser
      1           5           10           15
Glu Gly Gly Ser Phe Glu Gly Thr Asn Gly Ser Asp Gln Pro Gln Asp
      20           25           30
Gly Thr Asn Ile Leu Thr Ala Gly Glu Ala Ser Thr Glu Pro Val Glu
      35           40           45
Glu Glu Leu Val Ile Glu Ala Lys Asn Gly Asp Ser Gly Lys Leu Glu
      50           55           60
Asp Val Gly Ser Pro Val Glu Ala Gly Glu Ser Gly Ser Thr Ser Asn
      65           70           75           80
Cys Leu Gly Ser Ser Ala Gln Glu Asn Arg Lys Tyr Glu Cys Gln Tyr
      85           90           95
Cys Cys Arg Glu Phe Ala Asn Ser Gln Ala Leu Gly Gly His Gln Asn
      100          105          110
Ala His Lys Lys Glu Arg Gln Gln Ala Lys Arg Ala His Leu Leu Ala
      115          120          125
Thr Arg Ser Ala Ala Ala Ser Ala Asn Arg Ser Gly Ala Thr Ala Trp
      130          135          140
Cys Gly Asn Ile Asn Gly Asn Leu Tyr His Arg Asn Phe Leu Phe Asn
      145          150          155          160
Asn Ser Tyr Phe Thr Arg Met Gln Val Phe Gln Glu Asp Phe Pro Thr
      165          170          175
Phe Gln Thr Pro Gln Ala Val Ala Ala Pro Ser Ile Pro His Tyr Ile
      180          185          190
Phe Ser Tyr Gln Gln Gln Gln Ala Pro Val Gln Ser Arg
      195          200          205

```

<210> 1177

<211> 116

<212> PRT

<213> Pinus radiata

```

      <400> 1177
Val Pro Glu Asn Ser Lys Gln Ile Ile Asn His Gly Leu Ile Leu Pro
      1           5           10           15
Glu Met Gly Ser Val Asp Ser Gly Arg Glu Gly Thr Arg Ala Ile Leu
      20           25           30

```

Ser Asp Asp Cys Val Lys Phe Glu Cys Arg Tyr Cys Cys Arg Val Phe
 35 40 45
 Pro Thr Ser Gln Ala Leu Gly Gly His Gln Asn Ala His Lys Arg Glu
 50 55 60
 Arg Arg Arg Ala Met Thr Arg Phe Gln Arg Ser Pro Ser Asp Ser Ser
 65 70 75 80
 Asn Tyr Ser Gly Lys Gln Asn Ser Ile Asp Leu Phe Ser Arg Glu Arg
 85 90 95
 Val Pro Gly Ser Ser Leu Leu Ser Pro His Gly Thr Arg Asp His Val
 100 105 110
 Val Cys Ser Asp
 115

<210> 1178

<211> 122

<212> PRT

<213> Pinus radiata

<400> 1178

Lys Lys Ala Ser Glu Trp Gly Glu Ser Val Val Ser Thr Ser Glu Asn
 1 5 10 15
 Ser Asn Asp Leu Asp Pro Pro Thr Tyr Ser Glu Thr Ser Ser Pro Ala
 20 25 30
 Gln Gly Ser Asp Pro Arg Val Phe Pro Cys Asn Phe Cys Gln Ser Lys
 35 40 45
 Phe Tyr Ser Ser Gln Ala Leu Gly Gly His Gln Asn Ala His Lys Arg
 50 55 60
 Glu Arg Thr Leu Ala Arg Arg Ala Gln Arg Met Gly Ser Phe Ala Gln
 65 70 75 80
 Arg Tyr Ser Ser Met Ala Ser Leu Pro Leu His Gly Ser Ser Glu Thr
 85 90 95
 Ser Trp Thr Pro Ser Arg Phe Leu Gly Ile Lys Ala His Ser Leu Ile
 100 105 110
 His Lys Pro Phe Pro Glu Gly Asp Asn Leu
 115 120

<210> 1179

<211> 113

<212> PRT

<213> Pinus radiata

<400> 1179

Met Thr Gln Ala Thr Asn Tyr Thr Ala Gly Thr Ile Arg Asp Asp Gln
 1 5 10 15
 Glu Glu Gln Cys Val Arg Arg Gly Pro Trp Thr Val Asp Glu Asp Met
 20 25 30
 Ser Leu Ile Arg Cys Val Thr Thr Arg Gly Glu Gly Arg Trp Asn Thr
 35 40 45
 Val Ala Lys Phe Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu
 50 55 60
 Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Lys Arg Gly Asn Ile Thr
 65 70 75 80
 Pro Glu Glu Gln Leu Leu Ile Leu Glu Leu His Arg Leu Trp Gly Asn
 85 90 95
 Arg Trp Ser Lys Ile Ala Arg Gln Leu Pro Gly Arg Thr Asp Asn Glu
 100 105 110
 Ile

<210> 1180

<211> 76

<212> PRT

<213> Pinus radiata

<400> 1180

```

Met Arg Arg Pro Gln Arg Lys Lys Lys Thr Asp Ala Glu Asp Asp Phe
 1                    5                      10          15
Asp Glu Cys Tyr Tyr Thr His Met Cys Lys Ile Cys Lys Lys Lys Phe
 20                      25          30
Val Ser Gly Arg Ala Phe Gly Gly His Met Arg Ile His Gly Pro Val
 35                      40          45
Ala Thr Ala Ala Ala Ala Ala Glu Ser Asn Gly Lys Asn Leu Glu
 50                      55          60
Pro Gln Arg Lys Arg Ser Arg Ala Glu Glu Ile Arg
 65                      70          75

```

<210> 1181

<211> 130

<212> PRT

<213> Pinus radiata

<400> 1181

```

Val Gly Cys Lys Gly Ser Asp Ala Phe Glu Glu Ser Leu Lys His Phe
 1                    5                      10          15
Cys Arg Val Cys Lys Arg Arg Phe Ala Cys Gly Arg Ala Leu Gly Gly
 20                      25          30
His Met Arg Val His Gly Ala Glu Leu Gly Ala Ile Lys Gly Gly Gly
 35                      40          45
Leu Glu Glu Gln Phe Glu Lys Gly Arg Val Lys Glu Pro Ser Arg Ser
 50                      55          60
Cys Gly Asp Ser Val Lys Glu Gly Val Gln Asp Glu Val Glu Gly Leu
 65                      70          75          80
Asn Ser Met Tyr Thr Leu Arg Arg Asn Pro Lys Arg Ser Trp Arg Phe
 85                      90          95
Ala Asp Gln Asp Tyr Ser Phe Ala Phe Gly Gly Val Asp Gly Ser Gly
100                      105          110
Ala Lys Arg Phe Gly Ser Thr Phe Leu Arg Asp Ser Arg Val Cys Glu
115                      120          125
Glu Cys
130

```

<210> 1182

<211> 86

<212> PRT

<213> Pinus radiata

<400> 1182

```

Arg Asn Tyr Leu Gly Glu Tyr Thr Gly Glu Leu Ile Ser His Arg Glu
 1                    5                      10          15
Ala Asp Lys Arg Gly Lys Ile Tyr Asp Arg Glu Asp Ser Ser Phe Leu
 20                      25          30
Phe Asn Leu Asn Asp Gln Tyr Val Leu Asp Ala Tyr Arg Lys Gly Asp
 35                      40          45
Lys Leu Lys Phe Ala Asn His Ser Pro Thr Pro Asn Cys Tyr Ala Lys
 50                      55          60
Val Ile Met Val Ala Gly Asp His Arg Val Gly Ile Phe Ala Lys Glu
 65                      70          75          80
Arg Ile Ala Ala Gly Glu
 85

```

<210> 1183

<211> 462

<212> DNA

<213> *Bucalyptus grandis*

<400> 1183

acaaacaac	aaacaagacg	gaacgagatg	aagacggttc	agtcgaagaa	gttcaggggc	60
gtcagacagc	gtcactgggg	ctcttgggtt	tccgaatttc	gccatccctc	gttgaaagaga	120
agggtgtggc	tgggcacgtt	cgagacggct	gaggagcgcg	cacgagccct	cgaccaggcc	180
gccatcttga	tgagtggccg	caatgcgaag	accaacttcc	cgacatctca	aaccacgaac	240
ggcgaccocg	cgctgcacaa	ttccttgtct	tctcgaagc	acttgcgga	gatcctccac	300
gcgaantcaa	ganatgcagc	aagacgcgct	cgccatccct	ccactgccta	aggetcgaca	360
ctgagaactc	ccacatcgga	gtctggcaga	aggggtcccg	ccagcgctcg	actcaactgg	420
gtatgaccgt	acagtcggaa	caaaaatccg	atccattggt	ag		462

<210> 1184

<211> 340

<212> DNA

<213> *Bucalyptus grandis*

<400> 1184

gactccccct	atccccctct	tttctccctc	tcaagaatca	agagattact	atggaaagcg	60
aacgctacga	tgagacgaca	gaggggcagc	gaatcaagag	aagggccgac	cagcagcagc	120
agcagcagca	cgacggcgcg	cagaagcctt	acaggggtat	ccggatgagg	aagtggggga	180
agtgggtggc	cgagatcgag	gagcccaaca	agcgctcccg	catctggctc	ggctccctatg	240
ccacccccgt	ggcgccgccc	cgcgctcagc	acacggcggt	cttctacctc	cgcgccccct	300
ccgcgcgcgt	caacttcccc	gaactctatc	ggcgcgaggg			340

<210> 1185

<211> 190

<212> DNA

<213> *Bucalyptus grandis*

<400> 1185

cttgggggtg	acatggcgcg	acgtggcgga	ggaaggagcg	gaacggcggc	tccgaggcgt	60
ccgacgcgct	cttgcgcgga	gctcatcatc	gccatcgcta	caaggagagtg	aggatgcgga	120
agtgggggaa	gtgggtggcg	gagatacggc	agcccaacag	ccgggaccgc	atctggctcg	180
gtcctcagc						190

<210> 1186

<211> 473

<212> DNA

<213> *Bucalyptus grandis*

<400> 1186

aacaaaggtn	tgtgtatgga	accattctgg	atagcattgc	aaaggttact	ggaatttgtga	60
agtttgatct	gcattgctgag	ccagaggaag	gaaaaaagaa	gattgaggtc	ggaggaagtg	120
ttgcagggtg	gtttgacctt	ggaccaggtt	gaattnggtt	ctgaagctgt	ttttgtccct	180
cgagagcctg	gcatactctt	tgaagaagat	gatgggtacc	tgatattctt	tgtccatgat	240
gaaagcacag	ggaagtgcgc	agtaaatgta	attgatgcga	aaaaacatgt	atctgatcct	300
gttgcgtcgc	ttgaattacc	ccataggggt	ccattatggc	tccatgcctt	cttgcgtgact	360
gaggaaacac	ttcaggaact	ggctaagctg	taggtctctt	catgcacgaa	ttgttgggaa	420
tcgagatggt	gcgaggggag	gcatactcct	ggaaagctgc	tacagtgtat	cta	473

<210> 1187

<211> 333

<212> DNA

<213> *Bucalyptus grandis*

<400> 1187

accagatcca	gatgcagagg	tcattgcact	atcgccaaag	acgctcatgg	cgacgaacag	60
gttcggttgc	gagatatgca	acaaaggctt	ccagagggac	cagaacctgc	agctgcaccg	120
gagggggccac	aacctgccat	ggaagctccg	gcagaggagc	aaggagatcg	tcaagaagaa	180

ggtttatata	tgccctgaga	agacgtgcgt	gcaccacgac	ccttcaaggg	cacttgccga	240
cctcactggg	atcaagaagc	acttcagccg	gaagcatggc	gagaagaagt	ggaagtgtga	300
gaagtgcctc	aagaagtacg	cagtccagtc	aga			333

<210> 1188
 <211> 420
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1188	
taaaaacacat	cgagttcttc
cgccgcgcgc	cccttcgccc
ctccaagcgc	ccccgcgcgc
ctgctctcat	atgctcgccc
gtgctccatc	tgccacaagg
ccactacgac	ggcggcagca
cggtcctagc	cacacgactg
	tcagccaccg
	cgagccgcat
	gacttgaact
	tgccggcctt
	60
	120
	180
	240
	300
	360
	420

<210> 1189
 <211> 365
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1189	
tgacgcgcgag	cgacgtgggg
agcacttccc	gctcgcgggc
aggacgtcgg	cgggaaggtg
acgtgctcac	caagggttgc
ccgtntgctt	ccagcggctg
ggggccagcc	gccggcgcgc
tgcttc	
	60
	120
	180
	240
	300
	360
	420

<210> 1190
 <211> 434
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1190	
atcacttcaa	caccatgacc
ctgaagaact	tcgatgctgc
cctagctcga	gcactcggtc
tcgtgggagg	tgagagcctt
ccgaggctct	acacttggct
ggccacatga	atgtccaccg
ctggcggaac	aaaattcttc
ttcccgaatc	aaga
	60
	120
	180
	240
	300
	360
	420
	434

<210> 1191
 <211> 479
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1191	
gaatcgcttc	ttggaacttc
acccaaaaaa	tggtgagggg
caagtgaact	ctctgaagcg
ctttgcgatg	ctgaagctgc
ttcactctca	gcgatgagcg
tgacgcgaga	aaactaccga
gcaagagtga	tcgaactctc
acgtgtctcag	ttgaggagct
	60
	120
	180
	240
	300
	360
	420
	479

<210> 1192
 <211> 310
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1192
 cctcttctctct cttctctctcc ctctctctgt cgcagagctc cgtctgaact cgcagaatcc 60
 acgcgcgagag cgaccacaaga gtgttttcaga acagtccgtc catggccttg gaagctatca 120
 actctccccc cgccgcctca ggcgcgttcc agttcatgga ggagcccttg agctcccctg 180
 tcttgagacc cctgaacaag cgcaagcgct ccaccaccct cctccggaag 240
 atgagtacct cgccctctgc ctcatcatgc tcgccgcgag cggcgccgcc cccaagccca 300
 accaccacgc 310

<210> 1193
 <211> 466
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1193
 tttttttttt tttttattca aaaacaaaat ctacttgcc ctttcttaat atatatagtagc 60
 caaagccttc tggagatcac cttttatcac ctaccaccag tcagataggt ctattgaata 120
 tgcttgattg ctgcttcttc aagcatatgc aactacaaag actcccatat caaagcacta 180
 gctgcatata cactttttaag ctaactaaca agagaattta aaaagaaaaa cctcgcgtca 240
 ccaaaaaggc tcgatccata tgggcaccaa acaaatagc tcacattggc ataatgctttg 300
 gaccattatc aggcgatccc atccctgcag ctaactcagc atcaagctga gtatgtggcg 360
 caggaccatc catttgcttc atacgtttct tgtggcgctt cgtcttgaaa tgctcgtccc 420
 tcgtagcaac attcggaaaa tatcggctgc agtgccagca atagta 466

<210> 1194
 <211> 295
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1194
 gccaccctac acacacccaa gaaaattctt agagcctcct tagatatgcc tacagacctg 60
 gacaattctg ccacagcttc aggggaagct agtgtctcgt cttctggcaa tcagccgcct 120
 ccacaaccag gccaccgcct tccaccacc aagaaaaaga ggaatctccc tgggaatgcc 180
 gatccagatg cagaggtgat agctctgtct ccacgaccc tattggccac caacaggttc 240
 gtctgcgaaa tctgcaacaa gggatttcag agggaccaga acttgacgtt ccaca 295

<210> 1195
 <211> 337
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1195
 tccaccctca ctgcggaagt caaaattctt tagtgtagcc atattcttga tgaacattca 60
 cagcgaacta ccgtcggagc tgcgggtgcc gagccggcg cagtcgtctt cgcgcgtccc 120
 gtgcagtcgt tcgcagtcgt agtctctcgc gagccacgcc gcgtgctccg acgaggagcc 180
 ggccgtggcg ctggtctcca gccggcccaa gaggcgggct gggcggaagg tcttcaagga 240
 gacgaggcac ccggtgtacc gtgggtgtgc gcggcggaac aggggcaagt ggtgtgtgca 300
 gctccgggag cccaacaaga agacccgggt atggctc 337

<210> 1196
 <211> 450
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1196
 gaatgatgca tgtgatggag cggtaacagg acttgacactg tcaaatgccc gnacgtcat 60

cggctctgcc	gaaactcacg	gagagagaga	gatggcggag	agagaggaga	aggggaagta	120
cgacgagatg	atgatgaaga	agggggagca	cggaaggata	gcggaggata	atcccaagcc	180
gaagaagggg	gtgacgtcca	aggttgtgga	ctacattgag	aagctgatcg	tgaagtctat	240
gtacgactcc	ttctctgctc	accaataacc	cgccggcaac	ttcgtctccc	tcgccgacga	300
gaccctccc	gtcacgac	tcccgtcgt	cgcccatctc	cctgattgct	tgaattggaga	360
attcgtccgg	gtggggcccc	atcccaagtt	tgcgccggtc	gcgggatacc	actggtttga	420
tgagatggc	atggttcatt	ggatgcggat				450

<210> 1197

<211> 351

<212> DNA

<213> *Eucalyptus grandis*

<400> 1197

ctccagccag	cttctgtctc	ttataaacac	tagccccacc	ccattcatta	tcactttcac	60
tccaacccaa	cagctatcgc	actatcccac	tgacagcgcc	ctcccaagaa	ccctttctct	120
tctgtatccc	atcccaatcc	ctgcgcttc	gacttcccac	agccgtcctt	ctcgtgcgcg	180
ctgtcccaag	ggagtgcgc	catggcagcc	ccggggaact	tctccgacga	ggaggtgcgc	240
ctcgcgtccc	accacccaaa	gaagcgccgc	gggaggaaga	agttccggga	gaocgcgccac	300
cccggtgacc	ggggagtgcg	gctgcgtgac	tggggcaagt	gggtctgcga	g	351

<210> 1198

<211> 359

<212> DNA

<213> *Eucalyptus grandis*

<400> 1198

agaacacctc	agaatcaaca	ccactcccac	atttctctct	ctaagatccc	acacccaacc	60
gccacctcca	atctctctct	ttctctctct	tcttcagtgt	ctgccatggc	tttggaggcc	120
ctcagctccc	ccacgcgtcc	ctccgccccg	ttccaattca	tgaaggactc	ctcccccgcc	180
gcgcgcgcgc	cgccctctct	ctctctctcc	gctacgacc	tccccctcgc	cgagccctgg	240
gccaaagcca	acgcctccaa	gcgcccccac	aaccgcctct	cagaggacga	gtacctcgtc	300
ctctgctcca	ctatgctcgc	cgcggcgccg	gcggccggga	ccctcccccc	gcgcctctcc	359

<210> 1199

<211> 645

<212> DNA

<213> *Eucalyptus grandis*

<400> 1199

tcgactgaga	gatcctagt	gaaatagaag	atttctctgat	accatcgatc	cattctttctc	60
caatggctgc	gaatttcgtc	attccaacca	aaatgaaggc	ttgggtgtac	cgtgagcagc	120
gagactgcgc	caacgtattg	ggatgtggacc	cggaaactcaa	ggtccctgaa	ttgcaagaag	180
gccaaagtct	gggttaagtt	cttgccgcgg	cgctcaatcc	aatcgacacc	gcgagagtga	240
anggggggta	tcaagctccc	ggctttttct	taccggccgt	gccaggttac	gatctcgccg	300
gcgttgtgtg	gaaggtgggc	cgcgaaagtaa	aggagctcaa	ggtcggggga	gaggtatatg	360
ctgttatgtt	tcaagcccaag	aaagacggga	cgctggctga	gtacgcagcc	gtggaagagt	420
cattcttgcc	tttgaagccc	aagaagctgc	gtttcgggga	ggctgcttct	ctgcgctggt	480
cattcagacc	gctatggagg	ccttgaagaa	actggcctct	ctcatggcaa	gtcccttctt	540
cgctttaaagt	ggtgctgggt	gcgtcgccac	actcataata	cagctagctt	aaggaaagttt	600
tggtgatcca	agagttccag	ttcattcaac	actgggaaac	ctaga		645

<210> 1200

<211> 376

<212> DNA

<213> *Eucalyptus grandis*

<400> 1200

tttttttttt	tttttgtgta	ctgggtgcact	atgaattgtg	agcattcaat	caaaactatat	60
atagacaaca	ttcttctcta	tataggcggg	agcaactacg	gngtgtgacg	caaaatttacc	120
aaagccagca	gctagcacag	gatgtcaaga	ttcaccctcca	aaccgataaa	gtcgcagatgg	180

ctctattaat	ccagccaaga	tatagagccc	cctccctctg	ctcgattctg	taattccggt	240
gatactgctt	cagcatatcg	agcacagcac	gagtaaccga	tgcgtccact	ggtagctgat	300
tgaaccgggc	catttggaa	ctggaccgccc	atttgcggaa	aagetcatgc	ctttccatcc	360
tctcangccc	atcaca					376

<210> 1201

<211> 461

<212> DNA

<213> *Eucalyptus grandis*

<400> 1201

cgacaccgac	caggggtgttc	atgtattgtt	tgtatataac	cccccaagtgg	aaagggccca	60
aaacacaagc	caacatgcac	atgtaattgtc	tgtctgaccg	taaaagcgccg	tttccgcacc	120
ttgatgctga	ggcgcgaaaa	gaaacagttg	gagaaagaag	gggaagggttc	gcgcaagaag	180
ctgcacaatc	agaacctatc	acttgcagaa	aaatcacccg	aagacgaccc	ttcaaatgac	240
aataacaaca	atgcaaatgg	cagcccaagc	cagaaaaaag	tgggcaatga	tggttccgac	300
gacgaaatga	acaggggttaa	aagctcgggt	tcacctttta	aaggctcagat	cgattctta	360
attcagccag	agcgcgagga	ggagctctcg	cctgggtcag	attctggtgg	tatgatgaag	420
ttgctacatg	atgccacca	gaatatctca	ggcagagggc	t		461

<210> 1202

<211> 447

<212> DNA

<213> *Eucalyptus grandis*

<400> 1202

ggaagtacga	cgagatgatg	atgaagaagg	ggagcgacgg	agggatagcg	gagggtgaatc	60
ccacgccgaa	gaaggggggtg	acgtccaagg	ttgtggacta	cattgagaag	ctgatcgtga	120
agttcatgta	cgactctctc	ctgcctcacc	aatacctcgc	cgccaacttc	gctcccgctcg	180
ccgacgagac	ccctcccgct	accgacctcc	ccgtcgtcgg	ccatctccct	gattgcttga	240
atggagaatt	cgtccggggtg	ggccccaatc	ccaagtgtgc	cccggtcgcc	ggataccaat	300
gggtttgatg	agatggatgg	gttcatggga	tgcggataaa	aaatggcaaa	gctaacttgc	360
tctctcgcta	tgtaggagac	tcgaaaacta	agcaagagga	gtactatggg	ggagctaaat	420
ttatgaagat	tggagacctt	aaagggc				447

<210> 1203

<211> 454

<212> DNA

<213> *Eucalyptus grandis*

<400> 1203

catatatttc	tgtctgtacg	ccccgtcctt	tggcctgcat	ccatggccaa	tcagccaccc	60
ggtgagccccc	aaccaaaatcc	gccaccgcga	ccgcaccacg	ccccagcgat	ccaaatccct	120
gaccaaacac	cgcataatcc	gccttctctt	tcttctctct	cttctctctc	ttcttctctc	180
ttggccacac	ccggtgatcg	ggcggtttcc	tcgctagacg	cgatgctttc	tcagagcggg	240
tcgtcgcgcg	tggctcaatc	cacaggaggg	caccgcgttt	acggtggagt	ccggtccgcg	300
agcgggaagt	gggtctccga	gatccgcgag	ccccgcga	ccaccgcgat	ttggcttggg	360
acatacccga	atccccgagat	ggccgcgcgc	gcctttgacg	tggccgcgct	ggctctgaaa	420
ggctccgacg	cgccctgaa	cttccccat	gatg			454

<210> 1204

<211> 352

<212> DNA

<213> *Eucalyptus grandis*

<400> 1204

gtttttttacg	catgtagaaa	aagtcattga	gtttgcttgt	gctgcataca	ttcattgtctt	60
tagctgactg	gggcttgaga	gagtttgtgt	atgttactgt	cagacgccga	agggcggaag	120
gagaaagagg	aagttaaaag	aaggttcgcc	ttcaagacga	aatccgaggt	tgagatacta	180
gatgacggat	tcaagtggag	gaagtacggg	aagaagatgg	tgaagaacag	tcgaatccg	240
aggaactact	atcggtgttc	ggtggaaggg	tgtcctgtga	agaagagagt	cgaacgggac	300

agagacgacc caaggtatgt aataacaaca tacgagggca tccataatca cc 352

<210> 1205
<211> 400
<212> DNA
<213> *Eucalyptus grandis*

<400> 1205
ccgaattggc cgaacttgat gaattctcca ctttgaact catcacgcag tatctcttag 60
aagactctat caacctcgct caactccaac cggtgaaaa agagaacctg tttctcgatc 120
caggaccaga ctccgccagat tcagatcatc caacctggca agacctggag acaccaaatc 180
ttgagattaa agccgagccc atcaacctgg aatctccaga gtccgagttg gggctgcgag 240
agaagaatca ggcagaggct ggcctccgag ccaaggcaag ttacagaggg gttcggcgaa 300
gacctggggg aaaatatgct gcggagatag gggacccgac acgtaaaggg agccgggtct 360
ggttagggac ctacgacacg gacgtagatg ctgccaaagg 400

<210> 1206
<211> 408
<212> DNA
<213> *Eucalyptus grandis*

<400> 1206
ttttctccc ttggtgcgtg atgtgtggag gcgccatcat ttccgacttc gtcgagngcg 60
gtctgaccgc cgccgccccg ggagctgcgc ccccgagagg aagctgaccc ctccagagct 120
ctggtccgag ctgcagcccc cctccgacct cctcagcctc gacggccccg tggcccaagg 180
ccacccaac cctttctctc tcgtcgcaaa ccaactcaac caagtgtatg agagtgaaga 240
gaagaacagt gaggaggcgg gtacgggaca cgtgtcggag acccagaaga gccagagcaa 300
tgcccgagac cagaggggctc gcaagaacgt gtacagaggg atccggcaga ggcctgtggg 360
caagtggggc gccgagatca gggaccccca caagggcgctc cgcgtctg 408

<210> 1207
<211> 270
<212> DNA
<213> *Eucalyptus grandis*

<400> 1207
accgtgggat ccggcagcgc ccgtggggca agtggggcgc ggagatccgc gacccgagga 60
agggcgctcg ggtctggctc gggacgttca acaccgccga ggagggcgcg cgggcttacg 120
accgggaggg ccgtcaagatc cgcggcaaga agggcaaggt gaatttcccc aacgaggacg 180
acgcctcttc caccatcccg cgggctcacc agaccagca caccaccccc cagggtcccg 240
aactaccctc ctctgtatca acccaactgg 270

<210> 1208
<211> 339
<212> DNA
<213> *Eucalyptus grandis*

<400> 1208
ctttctgctg gacggaaacc accttggggc agctcgatcc ccgtgatgag caactttggg 60
gggcccaccg gtctccttgc gaggcaatga atgagggcgg gccattgaaa accataaagg 120
ataccataat cgataatatg cagtttctgc gctttctcag atatgcttaa aatcatatgg 180
ttagaataga tgatcgcaaa cctctgaaat gggaaaactg agagataaag tcggtaagct 240
ttcaacattt cagttagcaga ttctcctttg gagcctaact ccgtatagac ttgcgtctct 300
gtgcaatcca tgcgtgcctt aagggtctcg gcaaaagag 339

<210> 1209
<211> 405
<212> DNA
<213> *Eucalyptus grandis*

<400> 1209

aaacctcgca	attcaggaaa	agaaaccctt	ttttgatctc	tctccatctg	ctccgatggg	60
cggttcggag	gggatgaatt	cttgaaaaac	aaggaggaaac	gatcgtctcc	ttctctgggg	120
gggtcggga	ttggggggag	gaatgggggc	gcagcacaaac	tcaggacgaa	cccggaaatgg	180
gagaccatg	tgatcctgaa	cgtgtacagt	ctcaccctccg	cgaacagcta	caccgcctgg	240
tgcggcctgg	gcattctcca	ttccggcatt	caaggttctc	tgtgtagtctg	cattcttcca	300
gaaagccttc	aagtaactac	tgttaagcca	gagtatcatg	actctctccg	ggaagatggg	360
gctgaatctg	tgtcgactgt	gactaccgag	atagatgacg	ccgag		405

<210> 1210

<211> 521

<212> DNA

<213> *Eucalyptus grandis*

<400> 1210

tccttccttc	tccttccttc	tctccttcgt	ctccttcaga	catgtcgctc	aaccaccccc	60
tctctacttc	agacggcacc	cccaacactc	tctggtggac	cactcacccc	accatgttcc	120
gccagcaaaa	ctctctcttc	aatttcaacc	ccaccgacga	cgaccgcgaa	gacgagggct	180
cgcccccgcc	gccttcctgc	ctccgagggg	cgccgcgccc	ggcggagccg	tcgctctgca	240
agaaaagagcc	catgtttctc	aagccgctga	cgccgagcga	cgtggggaag	ctgaaacagg	300
tgggtgatacc	gaagcagcac	gcccagaaag	acttcccgc	gggtggcgag	gcgacccagc	360
agctgagctt	cgaggagcag	ttccgggaag	gggtggaggt	ccgctactcc	tacttgagga	420
gcagccagag	ctacgtcttc	accaaagggt	ggagccgctt	cgtcaaggac	aagcgccctg	480
acgcggggga	cgtggtcttc	ttcacccgga	ccgcgcccag	g		521

<210> 1211

<211> 537

<212> DNA

<213> *Eucalyptus grandis*

<400> 1211

ttcgaaatcc	ccatttcctc	tcgacctgtg	tagcttgcaa	ctcttggagt	cttgatagag	60
aaggagagag	aaggagaaa	agtgggtgat	gggtttcggg	ggaagtgtga	gcgtgccgcg	120
gaaggcgtgc	gactcgtgca	agaccgcggc	ggcgccgctg	ttctgccgcg	ccgacgcggc	180
gttctctgtc	ctcggtctgc	acgccggggt	ccacggggcc	gccaaagctg	ccgcgcgcca	240
cgagcgggtg	tgggtgtgct	aggtctctgc	gcaggccccc	gccgcgctca	cctgcaaggc	300
ggaagccgccc	gcgtctctgc	tcacctcgca	cgccgacatc	cactccgcca	accctctcgc	360
ccgcgcgccc	gcagggtgtc	ccgtggagcc	cttctctgac	gcgcgcgagc	ccatctccag	420
ggcgcgctcc	gccttcaact	ttctgcgcgt	gcctaccaag	accggcagcg	ccgacacgct	480
cgggcgcgag	gggtgcggct	tcggcggtct	gtgcagaaat	gaggagctgg	aggaagc	537

<210> 1212

<211> 399

<212> DNA

<213> *Eucalyptus grandis*

<400> 1212

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tcacatctgt	ccgatggctg	gttcggaggg	gatgaattct	tgaaaaaaca	ggaggaaaga	180
tcgtctctct	ttctgggggg	gctggggatt	ggggggagga	atggggggcg	agcacaactc	240
caggacgaac	ccggaatggg	agacccatgt	gatcctgaac	gtgtacgac	tcacccccgc	300
gaacagctac	accgcctggg	gcggcctggg	catcttccat	tcgggcatcc	aagtgcattg	360
taaaagaata	tggtcttgga	gcgcacgact	tttccagct			399

<210> 1213

<211> 283

<212> DNA

<213> *Eucalyptus grandis*

<400> 1213

ccccattccc	ccgtttcttc	catattcttc	aagcactctc	atttagggaa	tgagtgcctta	60
------------	------------	------------	------------	------------	-------------	----

gaagccacct	caagtttcaa	atTTTTtttc	tgcgcagttc	tcaattcaaa	tggcacgtag	120
ctcatgtaat	cagaaactga	ggaaaaggtt	atggtcgctt	gaagaagacg	agaaactggt	180
caattatata	agtagacatg	ggttgggatg	ctggagttcg	gttccgaagc	tagctggttt	240
gcagagatgt	ggaaagagtt	gcagattgag	gtggatcaac	tat		283

<210> 1214

<211> 324

<212> DNA

<213> *Eucalyptus grandis*

<400> 1214

ttttcaagaa	gcacgcccac	gtaacggggg	aaatgctgag	ggagaaccca	tctgacgggt	60
ctttttgttg	agggaaagga	aagagagagg	aggcagaggg	aggaaggaat	ccgcagcagc	120
agtcgtcgga	ggaggagggc	attttccagg	tgaaccccaa	gtagaattgc	gatattggtt	180
tattcgtaat	gggctgcgtc	gcttcaagaa	ttgatgaaga	agagaggggt	cgggcgctga	240
aggagagaaa	gaggctgatg	aagcagttgc	tggtgtttag	ggaagaattt	gctgatgccc	300
tgttggtcta	cttaagagcc	ctga				324

<210> 1215

<211> 358

<212> DNA

<213> *Eucalyptus grandis*

<400> 1215

tttaaatggc	ttgacgcagg	ggagggggaga	ttttctgaac	ttggggagat	ggtagaatat	60
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ggattttctaa	gagcagttat	tcaacttgcc	atacgttcag	caactggaaa	atagttaggt	180
cagggttatg	caactggaa	aggagcttca	acgagcacgc	cagcagggta	tatttgtag	240
ttctggaaat	cctggggatg	tcaagcataa	catggctgcc	attggccaatg	gggcatggc	300
ctttgacacc	gactatgccc	ggtggctcga	tgagcatcaa	cggctgatca	atgaacct	358

<210> 1216

<211> 329

<212> DNA

<213> *Eucalyptus grandis*

<400> 1216

ccgctgtggc	aagagctgcc	gcctccgggtg	gatcaattac	ctgcggccgg	acctcaagcg	60
gggcaacttc	accgaagaag	aggatgagat	catcatcaaa	ctgcacagcc	ttcttggtaa	120
caaatggctg	ctcattgctg	ggcgtttgcc	ggggagaacg	gacaacgaga	tcaagaacta	180
ctggaacacg	cacataagga	ggaagctttt	gaaccgagcg	atcgatccgg	ccactcacag	240
gctgatcaat	gagcccgac	aagatcacca	tgacgagccc	accatttctt	ttgctgctaa	300
ttctaaggag	atcaaagaga	tgaagaaca				329

<210> 1217

<211> 346

<212> DNA

<213> *Eucalyptus grandis*

<400> 1217

aagaaactgc	ccccatcaac	tcacaccggc	gttttcaaga	actcgagag	atcaagaact	60
cgagccggct	ctgcagcgct	gcaccgttat	gcgctcggag	tgccgcgacc	gcaagcccg	120
gaaggccccc	cacggcgccc	acctccacgc	ggccggggcg	ggggccgcgc	cgccgcagcc	180
gcaggagcgc	gagcacctcc	ctgcgcccg	ctgcgactcc	accaacacca	agttctgcta	240
ctacaacaac	tacaacttct	cccagccccc	ccacttctgc	aagtcctgcc	gccgctaactg	300
gaccacgcgc	ggcaccctca	gggacatccc	cgctggcgcc	ggcagc		346

<210> 1218

<211> 468

<212> DNA

<213> *Eucalyptus grandis*

<400> 1218
 aaactgggat agatggcgagg cagacgatga aaactgtgat agggagccta atgataatct 60
 aaatgcacct tcataccctc ctacccaacc tacgcaatct tatccaagag gaggctatag 120
 agtatgtagt ggctgcaacc gtcaaatagg ctatggcaac tatttgggat gtatgggaac 180
 tttcttccat ccggaatgct ttctctgtcg tgcttgacag tacccattc aagaatatga 240
 gttttcctta gcaggaaagg atccttatca ccagtcttgc ttcaaggagt tgacacatcc 300
 aaaaatgtga gtttgccatc aatttatccc aacaaatgga gttggtttga ttgagtatat 360
 atgccatcct ttcttggtccc agaaagtact gtccgtcgca tgagcttgac aaacacagct 420
 ccgatgggtg tagttggcaa cgggttgagg gcatgggaac accaccat 468

<210> 1219

<211> 162

<212> DNA

<213> *Eucalyptus grandis*

<400> 1219
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 gggaaaccgc aaccacaagg gttactacaa gtgcacaagt cctgggtgca cggttaggaa 120
 gcacgtagag agggcgctac atgacctaa gtcagtaatt ac 162

<210> 1220

<211> 354

<212> DNA

<213> *Eucalyptus grandis*

<400> 1220
 gcctggcatc actttctgaa gaagatgatg ggtacctgaa tattctttgt ccatgatgaa 60
 agcacaggga agtcggcagt aaatgtaatt gatgcgaaaa acatgtcatc tgatcctggt 120
 gctgtgtgtt aattacccca taggggttct tatggcttcc atgccttctt cgtgactgag 180
 gaacaacttc aggaactggc taagctgtag gtctctacat gcacgaattg ttgggaatgc 240
 agatgttctg aggggagcga tatctctgga aagctgctac agttgatcta atagttttag 300
 atttcatctg acagacatct ttatgctaaa tatagtggaa atataaagta tgggt 354

<210> 1221

<211> 310

<212> DNA

<213> *Eucalyptus grandis*

<400> 1221
 gcggaggagg ggctgagtcg gaaattgggg aactcggttg cttgcgaagg tagggaccgg 60
 gtgcgaagat gcgaggtggt cgggaagtgg agggcccgcg tggggatggc tgggttcgag 120
 ctgaagccac ttgggtcaaca cgtggccgaa tcaatgaagg cgaggctcga aagtgggaac 180
 cgggtcaacc cgggattcac ggtgaaagaa gagaatgggt ggatttgctt cggctggctc 240
 ggccgaacac tcaccgtcgc atccgcctgg cgttaagctc cactcgctcc cctctctctc 300
 cccctgtgca 310

<210> 1222

<211> 315

<212> DNA

<213> *Eucalyptus grandis*

<400> 1222
 atttcagatc ccatcatgna tgcataactt tgccattaca gagaattatg caattttcat 60
 ggtatcttct ctttatttca ggcccaagga aatgggtana gataacaagc taatatttac 120
 atttgataaa accaaaaaat ctgcgtttgg ggtacttcca cgaatgcaa agaacagact 180
 tcaaatcaga tgggttgagc ttccaaactg cttcattttt cacaatgcca atgcatggga 240
 ggaggaagat gaagtgtgtt tgggttacatg ccgtcttgag aatcttgatc tggacatggt 300
 cagtgaggct gtcaa 315

<210> 1223

<211> 393
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1223
 gcttaatcct caaagaaagt gaagctaccc ttcgtgaagc tcttcggaac atgatgcaga 60
 atggcgaatc gaaagtgcga aatgagggga aggccacagg caagaagcaa ggcaggcgca 120
 agagggatgt ggtcgacttg agaactcttt tgacactttg tgcacaagct gttactatgg 180
 atgacgagc aagcgcaggt gagctgctca agcagatcag aaggcatgcg tctcccacag 240
 gggcagggat gcaaaagatg gcacactatt ttgcgaatgg tctgcaggca cgctctgctg 300
 ggtcaggctc tcaaaatctt aaggctctca tggctaggcc aagatcggct gttgatgtct 360
 tgaagggtta tcatctctcc ctccacaattt tgt 393

<210> 1224
 <211> 337
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1224
 gagaaatcct catcatccgt caaggcaatc tcggatcttc aagccagcca ctgnagaagt 60
 gttcgtagca tctcttctca aagatctagc aggatcccc ggccttcttc aagcagctta 120
 cgatctttac aagtgggacc ttcagaagag agactgccat cagtcgcaga tggttactca 180
 agacattcga ggccactttc tgccatagga tggcgtaata atgatggggc tcggagatca 240
 agggatctca ctgaaagatt tcggtcggtt cctgatgaag gaagtggcgg tgatcaatta 300
 gaatatgagg gattcatgat tgcggatcgc ccagggt 337

<210> 1225
 <211> 226
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1225
 tgttggcacc atgtacacac acagtgtggt aaagcaggct ttgggatgct caagcaagag 60
 aatcttctct cgtggcgagg gatccggagc attcggaggc ggaggaggac gacggctacg 120
 aggcactctga gagngaagac ataacatcac tgaaccacag agagctgata atcctagaag 180
 acactcttga aaacggcctc ggaatgtgtcc gagaccagaa ggacga 226

<210> 1226
 <211> 415
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1226
 cggaccgcga ggaatgcagc gtggcggtgc ggaatgtcgg gccgggggtgc ttcggggggcg 60
 agcccttctct cgtggcgagg gatccggagc attcggaggc ggaggaggac gacggctacg 120
 tgggtgagtt cgtgcacgac gagcgcaagg gggagtcgag gttcctggtg atggatgcga 180
 agtcgcggga gctggacatc gtggcctcgg tcgggctacc caggcgggtg ccgtacgggt 240
 tccacgggct attcgtgagg gatagccacc tcaaaatgtc ttagcgttca tggggcgatga 300
 tgcgagctgg aggtacagag attggggtct tttattacag gatattacgt agcttagagc 360
 atgatacaaa gctatatccc accaacaatgc cgcagttaaa ttaggtgggg tagtt 415

<210> 1227
 <211> 389
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1227
 acattcatgg ggaatgcagc cctccaacat tcatctcagc aggcggaggga ggcgctgtcc 60
 caggggctag aacagctcca acagtcactc gtgcacacca ttgcggcggg gccacgcatc 120
 gaaggaatgc aacagatggc aatcgccctg ggcgaattaa ccaatctcga aggctttggt 180
 cgacaagctg ataacttgng gcaacatacc ctccatcact gncgcccgat actgagagtt 240

cgacaagccg	cacgcgattt	tttggatgc	ggagagtatt	atggctcgact	acgagcattg	300
agtactctat	ggggcgctcg	tcctcgaggg	tgcatgatgg	atgatgataa	ctcacgcca	360
acaacaacgg	acctgcaaat	tgttcaggt				389

<210> 1228

<211> 435

<212> DNA

<213> *Eucalyptus grandis*

<400> 1228

cttcacgcgc	actaggaatc	agggcttctt	ggagggattt	gggttctcca	cctcgctgct	60
caagcttctg	gaaactgcga	acggggggga	gaactccggg	agtgcggggg	tgctcagatt	120
gaactccgcg	tgccccctgc	tttgcgtgag	ttgacgccac	gccctccgag	acgctcaccc	180
tggtggcagt	caaggcgacg	gcgacgcgac	ggcggctgag	gagacaggag	ttggggcctc	240
atagtgttac	ctcgtgcccc	ccgagagcct	ggcgggtag	ggagctcttg	tgccagatcg	300
agcaactcgt	gaccttcccg	gacataccgg	aggaggtggt	cgtcgccggg	gtccaggtcg	360
ccggctgttc	gtccgcaccg	gcgaagagaa	agtgtgttgg	tatagaggcg	agaggagaga	420
gaagagagag	aagaa					435

<210> 1229

<211> 252

<212> DNA

<213> *Eucalyptus grandis*

<400> 1229

gcaatccaga	ccagatgctg	gaagtgatag	ccttgtcgcc	gaagacgctc	atggccacca	60
accgattcat	atgcgagatc	tgcaacaaga	gggttcaaa	ggaccagaa	ctccagctcc	120
acaggagagg	gcacaacctg	ccttggaagc	tgaagcaaa	accaaaggat	gaaccgataa	180
ggaagaaggt	gtacgttttc	cccgagccga	catgcgtgca	ccatgacgag	ttgagagcgc	240
tcggtgatct	ca					252

<210> 1230

<211> 326

<212> DNA

<213> *Eucalyptus grandis*

<400> 1230

catccatgcc	cgagacccga	aacgcgcgaa	cgcccgagc	tcgatcccc	atgccgggga	60
atttcccata	ccgcgcggcg	gagatccagt	agggggggcg	tcgnaagcg	gccctggagg	120
gggtatgcgg	ccgagatccg	agaccgggag	aagaagacc	gantctggct	cgccaccttc	180
gacacgcgcg	aggaagcagc	ccgcgcctac	gacgcggcgg	cccgagaatt	ccgcggctcc	240
aatgccaaaga	ctaacttccc	cctcggnctc	cgcccccgc	aggtcatggc	caagaccaac	300
tcggttagatg	catcagccag	tagcgg				326

<210> 1231

<211> 424

<212> DNA

<213> *Eucalyptus grandis*

<400> 1231

cttctacct	cgtcagccct	tcggctgttg	gatcagggtc	cgaaactgtg	ttcctagact	60
tgagctcttg	ttgcagcaat	gatgagtcga	gcgggaggga	ttctgtagga	gtcgcccttc	120
ctgacccagc	cgaatgtagc	aatgagcccg	aatctcatcc	ggcagctgca	ggaccaacca	180
cttcaagagt	cttttcttgc	aattactgtc	aaagggaagt	tttcagctca	caggcaactcg	240
gtggccatca	gaacgcgcac	aagagagaga	ggaccctggc	aaagcgggca	atgaggatgg	300
gcagtgtttc	ttcacagaga	tattccagct	tggcgctctt	gcctttgcac	gggtctccca	360
ctgtcaggga	gtcgggggac	aaagcgcaat	cttcgctgca	ccaggtgcac	caaggcatgt	420
tgca						424

<210> 1232

<211> 321

<212> DNA

<213> *Eucalyptus grandis*

<400> 1232

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gggggtgacgt	ccaaggttgt	ggactacatt	gagaagctga	tcgtagagtt	catgtacgac	120
tcctctctgc	ctcaccataa	cctcgccggc	aactctgctc	cctgcgcga	cgagaccct	180
cccgtaacgc	acctcccctg	cgteggccat	ctcctgatt	gcttgaatgg	agaattctgtc	240
cgggtgggccc	ccaatcccaa	gtttgccccg	gtgcgcggat	accactgggt	tgatggagat	300
ggcatgggttc	atgggatgag					321

<210> 1233

<211> 508

<212> DNA

<213> *Eucalyptus grandis*

<400> 1233

gacgagatga	tnatgaagaa	ggggagcgac	ggagggatag	cggaggtgaa	tcccacgcgc	60
aagaaggggg	tgacgtccaa	ggttgtggac	tacattgaga	agctgatcgt	gaagttcatg	120
tacgactcct	ctctgcctca	ccaatacctc	gccggcaact	tcgctcccgt	cgcgacgag	180
accctccctc	tcaccgacct	ccccgtcgtc	ggccatctcc	ctgattgctt	gaatggagaa	240
ttcgtccggg	tgggcccaca	tcccagtttt	gccccggtcg	cgggatacca	ctggtttcat	300
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tatgtgagga	cgtcgaaact	taagcaagag	gagtgactatg	ggggagctaa	atttatgaag	420
attggagacc	ttaaaggcct	ttttggttta	ctcatggtca	atatgcgaat	gctgagagca	480
aaactgaaaa	tactagatgt	ttcatatg				508

<210> 1234

<211> 503

<212> DNA

<213> *Eucalyptus grandis*

<400> 1234

gcccgatgtc	ccctccctc	ccccgcgcgc	agacgtgacc	gatgccgagt	ggttctacgt	60
catgtccctg	accctcctt	tctcggcggg	agacggtatt	cccggaaggg	ccctcagcac	120
ggggctcttg	gtctggctga	ccgggtcctc	cgagcttgag	tcgtacaagt	gcgaccgggc	180
caaggaggcc	gagctccatg	gcacccgcac	catggtttgc	atcccgaact	gtgatggagt	240
ccttgaaatt	gggtcttgcc	atgtgatccc	tgaaaactgg	ggccttgctc	aacgagccaa	300
gtctcttttc	ggctccgcat	tgctccttcc	caagcacccg	ccaccgccac	caacctcgtt	360
ccagctccac	catgaccata	gcgacatttc	tttcgctgac	atgggaataa	ttcgggcggt	420
tcaagagaat	gatttcgctc	ctcacgatga	ccacgagaag	aaggtcaaga	agaagcagcc	480
gctggtggaa	ggagctggcg	gga				503

<210> 1235

<211> 367

<212> DNA

<213> *Eucalyptus grandis*

<400> 1235

aaaaagtata	tatacctcgg	cctatttgat	agtgaagtag	aggcagcaag	ggcgtatgac	60
aaggcagcta	tcaaatgtaa	tggaaagag	gctgtgacca	actttgaacc	tagtacgtac	120
gtggagagga	tgattgcaaa	agccagcaat	gaaaatagca	tctatggtag	ccatggtctt	180
gatctcaatc	tcgggatata	agcttctccc	aggggaatgg	tggaaaacct	agagccctcg	240
gacgacatgc	gtcaggggag	tagtttaagg	gtaggaaact	ctgctgcata	ctgggggtgat	300
ccatctgttg	aagggtttatc	gatgacatct	ggacaacctc	ctccttgacg	ggtgtttatc	360
ctagcgt						367

<210> 1236

<211> 360

<212> DNA

<213> *Eucalyptus grandis*

<400> 1236
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 cgggtcggat ccggcgctag aaccgagcaa aagaagcgag gattgcactt ctcaaaaggg 120
 cccggggaag tcccgcgagc ccggcgccca ccggccggga agaggcaca 180
 ggccgggggc tccgcgagac acccgagcta ccgtggggtc cgaatcgga actggggcaa 240
 gtgggtgtcc gagatccggg agccgagga gaagtcgaga atctggctcg ggacgtaccc 300
 cagcgcgag atggccgcc gggccacga cgtggcgga ttggccataa agggcagctc 360

<210> 1237
 <211> 539
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1237
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 taggagacgc catctctacgc cgcgngggcg nangccggcg ccacgaggag atgccagggg 180
 aaggaatcaa ttacttctct gtactggcc caggataaca gatcaagagc tacaacaaat 240
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 ggaaggttca gtttcaacct tgctactaat tagcattcat gatcctattc cttaactttt 420
 ataagctcaa actctgtaat cactcctctg tttagaataa tgttgagtc tagtgatgca 480
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<210> 1238
 <211> 520
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1238
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 gctacatcaa acttgggtccc cacagagcca aagcaccacg gaagtgaaca ggctgtgaaa 120
 gtttcaggat aacgtcattt tcaaccattt gcatcactgt cttcagttca gagtgaattg 180
 gctgtctcat cgaaggaatt gtgtctatcg gtaccactc aagcggttcg ctacggggct 240
 agtccacttg ctgaagctga tctctgatgga ttgttaggta ggaaagagca gcccaataat 300
 gtgatcgagg tgacacaaat ggataataaa ggggaatggcc cttcagtcac gactgagaga 360
 ctctctgacg atggatataa ctggagaaaa tatggacaga agcatgttaa gggctgtgaa 420
 tttccacgca gctattacaa atgtacctat cctaattgtg aggtgaaaaa ggttttcgaa 480
 cgtgctcctg atggacatat tacagagatt atctacaaag 520

<210> 1239
 <211> 489
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1239
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 tcagtgatag ctgcaattgt tgcttaataa gtgggagcca ccaattcacg tcaactgggc 120
 agtggatgtg acgtcagatg atagagatga tccctaaaaat tggatttgaa ggacatgctg 180
 attttctgtg cacaagcagt tgccgaagct gacatgccta agacagctcg ttgtatggag 240
 gtgttagaga ggaatggtgtc tgtctcagga gatccaatcc aacggttggg tgcttactta 300
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 tgcaagagcg ccaactggctc ggaattgatg tcttacctgt ccatccteta tcagatttgt 420
 ccatactgga agtttgccta cgagtcgga aatgttgtaa ttggggaagc tataaagtac 480
 gagtcaaga 489

<210> 1240
 <211> 306
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1240
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 ggccctcgtag tggcaccgct tgtgcccgcc gagagcgtgg ccgggtggggg agctctctgtg 120
 gcagatcgcc ggaggaggtg gttgcccgcc aggtctaggt ggccggttctg tctgcgcgc 180
 cggcgaaagag aaagtgtgct ggggagagag agagcgtgca gagaggtaga agagagagaa 240
 gagagaggag agagaacgtg aaaggaggca gaagagagag agtcgacgca ggggagagag 300
 aggaca 366

<210> 1241
 <211> 366
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1241
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 ggcttgacaa gaagtcaggt ctogaattgg tcatcaaatg caagagtgcg tctctggaaa 120
 cctatggctg aagaaatgta caaagaagag attggggatg cggaaatgga ctccaactca 180
 tctctcgaca cagccaagcc aaaaacagga gatataaagt cctccatgga ggaccgggtg 240
 gaagaagtgc aacagagttc aacagctaca cagagatgca gctcaggcca gctcatggac 300
 tcatcattcg accggactcc agatgtcgaa atggcaggcc actctgtggg attcaactac 360
 ctgaac 366

<210> 1242
 <211> 340
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1242
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 ctccggcgac ctccgagacg tcggcccgcta cgacttcgcc ggccagctcg actctccgat 180
 gatcgccaca ccgaagatcg acccggtctc cggcgagatg ttcgccctcg tcaagtactt 240
 cogattctcc aaggacggcg agaagtcccc cgacgtcgag atccccctgg ctgagccgac 300
 catgatgcac gatttcgcat accgaacgct ttgtcgtgat 340

<210> 1243
 <211> 684
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1243
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 atggggcgag caagttcttg tgggctcaag ctcttcggtg tccaacttga cctatctctt 180
 tctctctctc ctctcatcat agcatctagt ggttctgctc atccttatcc acttctcata 240
 aagaagagcc tcagcatgct tctgtctgtc tctctctcgc cctctctctc gtctccatct 300
 tcatcctctc cctcgccaaag agttcttctg gatgaacact gcaataagac ctccctcgga 360
 tatctctctg atggctctgc cgccagatcc caggagaaaa ggaaggaggt tcatgggacg 420
 gaagaagagc atcgacacatt cttaatgggg cttagaagaag tggggaaagg cgattggaga 480
 ggcattccca ggaactatgt gaccacgaga accccaaccc aagtcgagag tcatcgcaaa 540
 aaattctctc tccggcaggc cagttctaat aagaagaagc ggccgtccag cctcttcgac 600
 atgggtagtt ttccgtaacc atgtcacaaa tccatcacatt aattggggac caaactcacc 660
 gaagaaaaac tcagagtctt ttca 684

<210> 1244
 <211> 329
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1244

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ttaactttgt	gttggaaagag	catctgggtg	gacaagttaa	gtgtggatga	tgtgcgatgt	180
tgcttatgta	cccgatggcg	gctccagcag	tcaagtgttc	ggcctgccgt	tctgtgacag	240
aaatggggga	gcacaacaaa	aggaccccat	ggcggttaca	gcaaggggga	cttccccctc	300
ccagtacagt	tccttgatgg	gcacacgca				329

<210> 1245

<211> 383

<212> DNA

<213> *Eucalyptus grandis*

<400> 1245

ctccaacgcg	cgcccttctc	tcctggactc	ctctgagctc	tctccatctc	ctccggctcg	60
gcgcggccgt	cgctcgacgg	cgacgactcg	agggtttcca	tataattcac	ttgaaagaag	120
ctcgagaatg	ccgtggaaaa	caggacttac	cggtctctaa	acggaagaag	ataaggctct	180
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tgtgtatgca	catttcatgt	ttgtgcaatc	attaaggaa	gtaggggacag	ctctcaca	300
gttctttgaa	acagaatctc	caaatgggtc	tcctctgat	gcctcaatga	gtacaacacc	360
tgagccaatc	gcattaaccg	aga				383

<210> 1246

<211> 380

<212> DNA

<213> *Eucalyptus grandis*

<400> 1246

gctcttcgaa	cactttctcc	acccctaccc	gaaggattgc	gacaaagtca	tgctggccaa	60
acagacaggg	ctcactagaa	gccaggtgtc	gaattgggtt	ataaatgctc	gagttcggct	120
ttggaagccg	atggttggagg	agatgtacac	ggaggaaatc	aaggagcaag	aacagaatgg	180
ggggggagca	gaggaaaaac	caagcaagag	tgaacgcgag	gactcagcat	ccaagtcttc	240
tgccctccag	gacaaaggcc	ccaaactcaa	tgagaacagc	accaagagct	tcacaaacaa	300
ggagataacc	tcgaggaaac	acgacacccc	tgccatctct	actaattcgg	cttctctcat	360
cgggggaaac	gtccgcagca					380

<210> 1247

<211> 360

<212> DNA

<213> *Eucalyptus grandis*

<400> 1247

gcagccgagt	cgagcaagaa	actaacgaac	gcccgggtgc	attaggattc	ataatccaca	60
agaaacaaa	aaaaaaggat	catgggaaga	tccccatgtt	gcgaaggcaa	tggcctgaag	120
aaaggccctt	gggtctctga	ggaagacaag	aagctcctgt	attttatcca	gcagcagcgc	180
caaggagctc	ggatctctct	ccctaaacgt	gcaggtctta	atagatgtgg	caagagctgc	240
agattgagat	ggataaaact	cttgggccc	gacatcaaga	gaggggagtt	ctccccggaa	300
gaagaacaaa	ccatcttgca	tctccactcc	gtgctcgaaa	acaaatggct	ggcgatcgca	360

<210> 1248

<211> 351

<212> DNA

<213> *Eucalyptus grandis*

<400> 1248

tttttttttt	tttttttttt	aaagtaaacg	aatttaagat	taaatataat	atgggggaacc	60
cagctagcta	gtcaagtttt	aaaatgttgt	gccaatctct	gtttctttta	tacaaagtgt	120
gggaaaccaa	aatttacatc	cgctcaaat	tgaggtaaaa	aaaaacccta	tctctctcgg	180
ctttgacttt	tcagccgccc	tcaggttgac	ttgaatacca	gggtcatcgc	accggcgggc	240
acaactctct	gcgacgcggg	ctgggagtg	cgatgctccc	cctcgtagct	cacgatcagc	300
atcgttgat	cgtggggggc	ctctccacg	tgtttctctg	cggggacccc	t	351

<210> 1249
 <211> 419
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1249
 gacgagatga tgaatgaaga ggggagcgac ggagggatag cggaggtgaa tccccagccg 60
 aagaaggggg tgacgtccaa ggttgtggac tacattgaga agctgatcgt gaagttcatg 120
 tacgactcct ctctgcctca ccaatacctc gccggcaact tcgctcccg cgcgcacgag 180
 acccctcccg tcaccgacct ccccgctcgc gccatctcc ctgattgctt gaatggagaa 240
 ttctgcggg tgggccccaa tcccaagttt gcccggtcgc cgggatacca ctggtttgat 300
 ggagatggca tggttcatgg gatcgcgata aaaaatggca aagctactta cgtctctcgc 360
 tatgtgagga cgtcgaaact taagcaagag gactactatg ggggagctaa atttatgaa 419

<210> 1250
 <211> 632
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1250
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 ggagcgacgc ggcacggagc ccgacggagc cgtcctccgc ccaccgctgc cgaggttgag 120
 agccatgtgc agcgacgcgc gcgcgcctcc cgcgcgcacc gccgcccggc ccggggagtt 180
 catgctgttc ggggtcaggc tgggtgtgtt ggaccccatg aggaagagcg tgagcctgaa 240
 caacctgtgc gactacgagc agccccaggc gcggcgccccc ggcggcgccg cgtcgccgaa 300
 ggacgacgcg ggagcgccgc cctccggcta cgcgtccgcc gacgaagccc tcgcgcacgg 360
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 cggctgttcc tgctcgggct acagaaagta ggaagggcg attggagagg catttcgaag 480
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 cgcgcgagca accctaatcg gccgtccgcc gccggactta gccttgtttg acatcaccac 600
 ccgatacggc cactggttgg tacaatgatg ga 632

<210> 1251
 <211> 202
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1251
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 aggttaacat gttgaaggat tacgcttcag aggaactggat tacaggtgtt gaccgcttcc 120
 ggttgagctt ggttgaattt cttgataagt tgaataagta tgcggagtc cctgttcata 180
 tgtacgtgtc ccttgaaaag gc 202

<210> 1252
 <211> 378
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1252
 gagataaaga actactggaa tacaagaatt aagcgactgc aacgcactgg catgacctata 60
 tatccaactg aggtttgtct gcaagtgtca agtgagaatc aagaactca taacatgggt 120
 aacttgcata ctgcaggcga agataattgt gatctctcac aggcagatcc actcgagatc 180
 ccagaggttg attttagaaa actggaactg catcttggtt tctcgtcttt ttggtctaca 240
 ctctggagcg ttccctcctt tggccttggg agagaggcaa tgggtctatc tgatgcttat 300
 tgcttccat ttccataag cgggtctcct aaacgccttc ggggtctctg gaccccatct 360
 cctgcttggt agtctgga 378

<210> 1253
 <211> 388
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1253
 gtgatatttag tgetcgatac ttgaaaaagg gcatcaatac agtcaaacga gataaaaaaga 60
 cataacatgc aaaactcaat acatgatctc cagaaaaagac catcatcttt aatttcagtca 120
 aacgaggtcg tttttacgca aacttcgggtc ataagctgtg ccttgcaatc gtttggtaaa 180
 cctccaaatg ctaagggtcac ggtcacattc ctctctgac tttgagcagc tcatggcacc 240
 aacgtccaag gaacatttct taaaaaggat gatccaaaag ttactgctct gattcaacaa 300
 gccgagctgc tcatgtccct tgcggtgaaa gtcaatgcag ataacatgga ccagagtctt 360
 gaaaatgctt ggaagggtct ccaggaa 388

<210> 1254
 <211> 380
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1254
 cgacgatggc gtcgggtcgg ttccggcgct gccatgacgc ggcggtgctc cactgcagc 60
 cacacagccc acaactcccg gacctgccc gcccgcgcg cgcgcgcgcg cgcgcgcgcg 120
 ggcgcggtga ggctcttctg ggtgaggtcg acgagcgct cgatcatcaa gaagagcgcc 180
 agcaccagca gcctctcgct ccaccaacct ctccccct cctcctcgcc gtcgctctcg 240
 ccttcgctgc gccgctcgcc ggccgcgggc tcgcccgcgt cggcgcgacca ccaactacgac 300
 caccaccacc accagcagcg cgacccgagc gggctactgt ccgacgatcc cgcgcaaggg 360
 gctgcgcgct ccgatcgccg 380

<210> 1255
 <211> 350
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1255
 cccatcatac gaaatgggta ttctcctcca caatatggca atggacctgc atatcacctt 60
 atgccaacat actacccgat gggctacagg atctgtgctg gatgcaatac agagatgtgt 120
 catggagcgt ttttgatttg catgaatgct gtttggcctc ctgaatgttt ctgctgcgt 180
 gcttgacccc tgccaatct tgattatgag ttttctttat caggcaatta tcttaccat 240
 aaatcttctc acaaggaaac ctaccacca aagtgtgatg tctgcagta ctttaccct 300
 acaaaccttg ccggtcttat tgagtacagg gcgcatccct ttggagta 350

<210> 1256
 <211> 377
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1256
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 gaggagtaac aagcagacag cagtgtatgt tgatgacac gagctatccg agatgatgga 120
 taaattgttg gtctgtcata ttaaggcaa gagtgcagat tcaaatgctg atgaatcctc 180
 taaaaaagaa gtaagtaaat ctttacagca gaatagacag acacacactg ctgatgggtg 240
 gaagtttcat aataagaaac caaccccaac cagcaaatatg acagagatgg ttgatctcag 300
 aactttgttg atcctttgtg cacaagctgt ctctctgac gatogaagga ctgctaataga 360
 ctatcctaagg cagattc 377

<210> 1257
 <211> 651
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1257
 actcgtggcg ctgttttcag ctttctagct tccggaggag gagggtgtgt gttgagcgaa 60
 acttgagag gtcatgaatt cgacaaccac tcagtttgtg tctctagaa ggaatggggat 120
 gtatgaccg atcatccaaa ttggaatgtg ggaacgagac ttcaagcaga atggaatacc 180
 taatgcgcg ccagctctga tcatactat gcacgcgaat ttggacaacc atgcggagga 240

tacttctcat	ggatcacagg	atactgctgg	caagtatgag	caagaacat	cgaacctta	300
tgataagggt	caaaagcgtc	ttgccccaaa	ccgtgaggtc	gcgcgcaaaa	gccgtctcgc	360
gaaaaaggct	tatgttcagc	agctagaagc	aagtcgtctg	aagcttatgc	agttagaaca	420
agaggttgac	cgagctaggc	aacaggggtg	gtacatggct	tcaggagtag	atccagctta	480
tccaggatat	ggtggatggt	taaattcagg	aatcgttgca	tttgagatgg	agtaacggga	540
ctggattgat	gaacagaata	gacaaatgat	tgagctgagg	gctgctttga	atgatcatag	600
aactgacgta	gagcttcgca	tctctgtgga	aagtgggcat	aaccactatt	c	651

<210> 1258

<211> 311

<212> DNA

<213> Eucalyptus grandis

<400> 1258

gacgagatga	tgatgaagaa	ggggagcgac	ggagggatag	cggagggtgaa	tcccacgcgc	60
agaagggggt	gacgtccaag	gttggtgact	acattgagaa	gctgatcgtg	aagttcaatgt	120
acgactcttc	tctgctcac	caataacctcg	ccggcaactt	cgtcccgctc	gccgacgaga	180
ccccctccgc	cacgacacct	cccgctcgctg	gccatctccc	tgattgcttg	aatggagaat	240
tgcctcggtg	gggccccaat	cccaagtttg	ccccggtcgc	cggataccca	tggtttgatg	300
gagatggcat	g					311

<210> 1259

<211> 588

<212> DNA

<213> Eucalyptus grandis

<400> 1259

cctagctgaa	actattactc	ccactgggtc	tctctctctc	tctctctctc	tctctcaaac	60
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aagctcttcg	gcttcaacgt	ctccgatgag	gaagactcag	ccgtcagcga	ccccattact	180
gttggcgaga	acggcgccgc	cggcgccgga	ggcggaagg	ccacgcgcgc	gggctgcgcg	240
gaagggcagc	tcccggtggg	ggcgcgccgc	gagcggaagt	acgagtgcca	gtactgctgc	300
aggggaattc	ccaaactcgca	ggccctgggg	ggccaccaga	acgcgcacaa	gaaggagagg	360
cagcaactca	agcgcgccca	gctgcacgcc	agcggaacgc	ccgcgctgtc	gtcgtcgtc	420
cggaacccca	tcatctcgcc	cttcgctacg	ccgcgcgacc	tgtggccac	cgtggggcgc	480
gtggtggtga	cggggcgccg	gcccacctcc	cgtcctggg	ttacgttcc	gcgtggcgcc	540
ccgcccttcc	aagtgtcgca	cggctgcgtg	ttcacgaccg	gccaggga		588

<210> 1260

<211> 620

<212> DNA

<213> Eucalyptus grandis

<400> 1260

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aacactgagg	aataaacctt	agaactacca	aataaggaga	gccacgggga	ctcgtttct	120
tgatgccac	aacggtccga	accttctttt	ggtgagccgc	ggagcaaac	tatcgtttct	180
tcgacgaggg	tattgacatc	cttcgaacca	cctgcaactc	tctgttccg	atccggccat	240
ggatgattga	gaaaagagtt	gagaactgat	gacgatgacg	atcttgcttg	ttcgtgcttc	300
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acctcggggt	gattaccgat	cagctggtgg	cacgggaagt	tctcttccg	gttctccct	420
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cccagccaca	gcctcagctt	cagcgtggag	tccttgatct	cggcgaccca	tcttcccga	540
ggcctttgtc	tcaccocgag	aaaccttctc	attgcatcat	cacccttcgc	tcttctcttg	600
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<210> 1261

<211> 562

<212> DNA

<213> Eucalyptus grandis

<400> 1261
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 gattgggctg ctatgcctgc atactatggt ccaagagtgt ctcttccgcc ttattataat 120
 tctgctgtat catctgggtca tgggtccctcat ccctacatgt gggggccacc acagcctatg 180
 atgcccacat atgggccacc ttatgtctgca atatactcac atggaggtgt ttatggacat 240
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 aattctgata atggagtgt gaagaagtgt aaaaagtgtg aagggtctgc aatgtcaata 360
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 gcagactcgg gagactcaag tgatgaggat caatcagggg cagataaaagc caggaggaaa 480
 agaagccgtg aaggaaactc atccaatggc gatggaaaat ctgaagtgcga aggaaaggct 540
 gctggggagg tggatgtctg tt 562

<210> 1262

<211> 384

<212> DNA

<213> *Eucalyptus grandis*

<400> 1262
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 aagaaggggg tgacgtcaaa ggttgtggac tacattgaga agctgacgtg gaagtcatg 120
 tacgactcct ctctgcctca ccaataacct gcgcgcaact tgcgtccgtg gaagcagcag 180
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 ttcgctccggg tgggccccaa tcccaagttt gcccggtgcg ccggatacca ctgggttgat 300
 ggagatggca tggctcatgg gatcgggata aaaaatggca aagctactta cgtctctcct 360
 atgtgaggac tgcaaaactt aagc 384

<210> 1263

<211> 381

<212> DNA

<213> *Eucalyptus grandis*

<400> 1263
 ccgcgcacat ccattcgcgc atctccgacc tcctctctcc acgcggccac tgtcccgtcg 60
 cgcgaattcg cccgcgcgtc gtaggagacc gcactctcgc ccgcgcgcgc gatggcccca 120
 gcttcattcc ctgcgctagc aacgcatttc aatggaagta tgctaatgat actaatcat 180
 ctgggtgaaa tcacacacgt aatggaaggg cagcaggaga tgccagggga aggaatcaat 240
 tacttctctg ttactggccc aggataacag atcaagagct acaacaaatc tcaggagact 300
 cgaactctgt aatcactctg ctgtttgaga aaatgttgag tgctagtgat gcaggtaaaa 360
 ttggacgttt agtgcgtcca a 381

<210> 1264

<211> 316

<212> DNA

<213> *Eucalyptus grandis*

<400> 1264
 ccgagaagag gacccccaa gaggagggga ggaagccagg cctcgccgcg gacacgccgc 60
 tgaaccacgt ggaagccgaa cggcagcgcc gggagaagct gaaccaccgc ttctatgcgc 120
 tgcgagcggt ggtcccgaac gtgtccagga tggacaaggg gtcctgtctc tccgacgcgc 180
 tgtctacat caacgagctc aagtccaaga tcggcgatct ggagtcacag ttgcagagag 240
 agtccaagag ggtcaaacag gagggtcacc acgcaaccga caacctgagc accaccacct 300
 ccgctgacca tagtag 316

<210> 1265

<211> 356

<212> DNA

<213> *Eucalyptus grandis*

<400> 1265
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 tcccgtcgcg cgaattcacc ccgcgcgtcgt aggagaccgc atcctaagcc gccgcggcga 120

tgccggcgcc	acgaggagat	gccaggggaa	ggaatcaatt	acttcctcgt	tactggccca	180
ggataacaga	tcaagagcta	caacaaatct	tggagactca	aactctgtaa	tcactcctct	240
gtttgagaaa	atgttgagtg	ctagtgtatg	aggtaaaaat	ggacgtttag	tgctgccaaag	300
aaaaatgtgcc	gaggcctatt	ttccgcctat	ttcccaagct	gaaggattgc	cgctca	356

<210> 1266

<211> 360

<212> DNA

<213> *Eucalyptus grandis*

<400> 1266

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ctggcgctcc	ctccccaaat	ctgcgggctc	tctcaggtgc	ggcaagagct	gcaggctcag	180
gtggataaac	tacctccgcg	ccgacctcaa	cgcggaacct	taccgagga	agaagacgag	240
ctcatcatca	agctccacag	cttgctcggc	aacaagtgg	ctctgatcgc	ggggagattg	300
cccggaagaa	ccgacaacga	gatcaagaac	tactggaaca	cccacatcaa	gcgcaagct	360

<210> 1267

<211> 375

<212> DNA

<213> *Eucalyptus grandis*

<400> 1267

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ctatggctct	tactccctct	gtccccattt	accctcccat	ctctccactg	caccgctcca	180
ccacaactccc	tgtctgtagc	caggctcggc	cctcggtgta	gtccaaaggg	gacccaagaa	240
agaagtacca	atgtgccgcg	tgcccgctgc	catttgccag	ggcttaacat	ttaaagacct	300
acatggcaac	gcatgacccc	aacaggctga	agccccatgt	gtcccccat	cgttcttgog	360
gcgcttcctt	cagca					375

<210> 1268

<211> 567

<212> DNA

<213> *Eucalyptus grandis*

<400> 1268

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tacgactcct	ctctgcctca	ccaatacctc	gcgggcaact	tcgctccggt	cgccgacgag	180
acccctcccg	tcacogacct	ccccgtcgct	ggccatctcc	ctgattgctt	gaatggagaa	240
ttcgtccggg	tgggccccaa	tcccaagttt	gcgccggtgc	ccggatacca	ctgggttgat	300
ggagatggca	tggttcatgg	gatgcggata	aaaaatggca	aaactactta	cgctctctcg	360
tatgtgagga	cgctcgaaact	taagcaagag	gagtaactatg	ggggagctaa	atttatgaag	420
attggagacc	ttaaagggct	ttttggttta	ctcatggcta	atatgcaaat	gctgagagca	480
aaactgaaaa	tactagatgt	ttcatatgga	acagggacag	gcaatactgc	actcgtatat	540
caccatggaa	aactgttgcc	gcttttca				567

<210> 1269

<211> 567

<212> DNA

<213> *Eucalyptus grandis*

<400> 1269

tcgccacctca	atgcatgcac	tgaatctgca	gttgccacca	ttagacccaa	aacgggtgagg	60
tttaagccag	tgccaaatcg	agctccaaact	gcagtgaaat	catcccaggg	agaagtctct	120
ggaacagcaa	ccgggcaact	caatgataag	gctttaaagt	cagatgaaaa	gcttaccgta	180
atatacaaac	cattggccaa	gcttgctctca	aggtcaacgc	tctcgctctt	ggctaatatg	240
ggaagcttca	atatggctca	ccatcaaaaca	ttgtcaggtg	ccgaagcagc	tggttaaatct	300
caactgcagg	acaaaaacaa	ttcgagatcc	cagcctattg	gaaactctca	toggagtgtc	360

tcttcacaag	cagatatgga	tgggacaagt	gaacccttga	gattggcctc	ccagaacatg	420
gaagaagaca	cgagaacttc	accggccttg	aacatggatc	gccctctctt	cgatggatat	480
aattggagaa	aatatgggca	aaagcaagtc	aaggggaagc	aatatcctag	aagtctactat	540
aatatgcacac	acccaaaactg	cccggtg				567

<210> 1270

<211> 325

<212> DNA

<213> *Eucalyptus grandis*

<400> 1270

gccccgggtgta	cgtccgggaac	ggcgccaacc	cgctccacga	ggcggtcgcc	gggacaccact	60
tgttcgacgg	cgacggcatg	atccacggcc	tccggtctctc	cggcggtctca	gtgagctaacg	120
cgtccgggtt	caccggaacg	caacgcctga	tccaggaaacg	gggcctcgcc	cgcccgctct	180
tccccaaagc	catcgggcag	ctccacggcc	actccggcat	cgcgcggctc	atgctcttct	240
acgcccgcgg	ctctctcgcc	ctcgctgacc	accgtaattg	catggggcgtc	gcgaacgcgg	300
gcctcgtgta	cttcgacggc	cacct				325

<210> 1271

<211> 365

<212> DNA

<213> *Eucalyptus grandis*

<400> 1271

cacaggcgcg	atcggggccaa	gcgagcgctc	cccccgga	ttcagaaccc	agccgcggcg	60
ccccgcgcgc	ggcagcgccc	gtctccggcg	cccctctccg	gcacctccga	cgccgcggcg	120
gtccggagca	ccctcgaccc	ttcgattcgg	aggctgggtc	gctgaggctc	gaggcgacgc	180
gaattgttat	cgatagctat	cgagagtcac	cttgctgtga	atggctgtcg	aagcattctt	240
ctttatccaa	gaggggctac	aaatgtttgc	tgtgcattat	gtaacacaat	aacctctgtt	300
ccttctcctg	catatgtagg	tgcagatatg	gccagctta	tatgtggagg	ttgcaggaca	360
ctgct						365

<210> 1272

<211> 365

<212> DNA

<213> *Eucalyptus grandis*

<400> 1272

accgtgcccc	cgatgcaaca	gcatggatgc	caagtctctg	tactacaaca	actacaacct	60
gaatcagccc	aggcaccctc	gcagaaaagt	ccaacgggtc	tggactgccc	gaggaaacatg	120
gaggaaacatc	cctgttggcg	ctggccgctg	taagagcaag	aattcgatg	cagccacggg	180
ggcactgttt	cacaacacgc	gagtaacctga	atctcttcga	gctgattgtg	ctgggtgattt	240
gaaaacgcgc	ggaaaccacca	tctcgagggt	cggttcagat	ctctctaatt	ggggctcaatc	300
tgcagctcca	gtgccaagta	ctataaacgg	atttcttgat	cctggacgaa	caattccatg	360
ttctg						365

<210> 1273

<211> 328

<212> DNA

<213> *Eucalyptus grandis*

<400> 1273

aacaaatcag	nggaagaaaa	tatgcagcat	ttgaaggacg	aagctgcgaa	catgatgaag	60
aagatcgagc	tcttggaaga	ttcaagaagg	aagctccttg	gtgaaggctc	aggatcatgc	120
togatagagg	aactgcaaca	gatagaacag	cagctagaac	ggagtgttat	cagcattcgt	180
gctagaaaga	ctcaggtctt	caaggagcag	attgacaagc	ttaaagagaa	ggagaagatg	240
ttgacagctg	agaatgcaat	cttaactgag	aagtgtggaa	tcaagccccc	acaaagagca	300
aatgagtgc	gggtagtgcc	acttctca				328

<210> 1274

<211> 390

<212> DNA

<213> *Eucalyptus grandis*

<400> 1274

cttaccgagc	actccctcc	tgattctaac	tcgtccattt	tcgttggtag	cagtacatca	60
ttggcttaata	agcctaaata	cagagatatac	caagcaagag	aagccacaag	tggttcatacc	120
cgccaacact	cagatgaaga	tgatgctgcg	acagtggcag	atccaagcga	acagagcaga	180
tatctactctg	atcccaagcg	aattagaagg	atggtttcca	atagggagtc	tgctagaaaa	240
tcacgtaaaa	ggaacaacg	acacttagcc	gaactgaaa	tacaggctga	ccgacttaga	300
ggagaaagt	ctactttgtt	taagcaacta	ttagatgctg	cacagcacta	ccgccatgct	360
gatacaata	atcgagtgtc	gaaatctgat				390

<210> 1275

<211> 384

<212> DNA

<213> *Eucalyptus grandis*

<400> 1275

gaattacacc	caaccaaacc	aaaagagtca	taattcagga	tcacacctgt	ttagttaagc	60
aagaataaatt	ttccctctccc	ttttctcttt	ttgagccctt	tagagttaca	tgctctgggt	120
agcaatgacg	gggaactttg	gggtggggctc	aaactccatg	gaagagggct	ggaggaaaag	180
tcctctggact	gctgaggag	acaagttact	cattgagtat	gtgaagttgc	atggggaaag	240
aagatggaaac	tctgtagcta	ggctcacagg	gctcaagagg	aatgggaaga	gctgtagatt	300
gaggtgggtg	aattacttga	ggcctgacct	gaagagaggt	cagataaccc	ctcaagaaga	360
gagcgctatc	ctagactccc	gcta				384

<210> 1276

<211> 382

<212> DNA

<213> *Eucalyptus grandis*

<400> 1276

gtcgaccgag	tggaaagagag	gttgggccct	cgatctggt	caactcgcca	ccctctgoga	60
taagtgcggg	tctgcatttg	aacaggccac	gttttgcgaa	gttttccact	cgaaggactc	120
cgatgcggag	gagtgcgctt	cctgtggcaa	ggcctcgcat	tcgggatgca	ttgcttcgag	180
gatgctgctg	gagctgcctg	attgtggcgg	gatcaactgc	gcgacctgtg	cgaaaaagttc	240
aggacttctg	cctatcgcaa	gtgatgagag	gcctagttag	tttgccatga	ttaatgttctg	300
tactggtgaa	ctgcaatcta	gtaccacaga	caaccatttc	gatagcgacg	aggttgataa	360
actgaagctt	attcgattga	ga				382

<210> 1277

<211> 367

<212> DNA

<213> *Eucalyptus grandis*

<400> 1277

ataagatcgg	atcttttctg	ctttggcgac	gccggaaacc	cgaattcagt	gcccaaacag	60
tagtcgacgc	accgaccgac	cgaccgggaa	gtttccgatca	tggccgtgga	gatgtttcaa	120
gagccggaggt	cgcggttctc	cgactcgcgc	cggcggtacc	tgctgtcgga	ggactccgag	180
tgccgggtct	ctgagccgcc	gccgcgcgcg	acccggaact	ctcgccggcg	cggagccccc	240
gtgatctgcg	ggagctccag	cttcagcagc	ctgtaccggt	gcctgaccga	gaactggggc	300
gagttgccgc	tcaaagaaga	tgacccgga	gacatggtcc	tctacggcgt	ctccgcgacg	360
ccctcac						367

<210> 1278

<211> 384

<212> DNA

<213> *Eucalyptus grandis*

<400> 1278

cacgctcatc	ggctgcggag	aaactcacgg	agagagagag	atggcgggaga	gagaggagaa	60
------------	------------	------------	------------	-------------	------------	----

ggggaagtac	gacgagatga	tgatgaagaa	ggggagcgac	ggaggggatag	cggaggtgaa	120
tcccacgcgc	aagaaggggg	tgaactgcaa	ggttggtggac	tacattgaga	agctgatcgt	180
gaagtctatg	tacgactcct	ctctgcctca	ccaatacctc	gccggcaact	tcgntcccg	240
cgccgacgag	accctccgc	tcacgcgact	cccgctcgct	ggccatctcc	ctgatgtcgt	300
gaatggagaa	tcgctccggg	tgggcccac	tcccaagttt	gccccgggtcg	ccggatacca	360
ctggtttgat	ggagaaggca	tggt				384

<210> 1279

<211> 368

<212> DNA

<213> *Eucalyptus grandis*

<400> 1279

cacggcgcg	cgccggggtt	tcttggggcg	agggccgtgc	cgatgaaaca	ggcagggtctc	60
gcccgagaagc	ccacgaagct	gtaccgggga	gtgaggcaga	ggcactgggg	gaagtggggtg	120
gccgagatcc	ggctacccaa	gaaccgcacc	cgctctggc	tcggcacctt	cgacacggcc	180
gaggaggccg	ccctcgccca	cgacaaggcg	gcgtaccggc	tgcgggggtga	tttcgcgcg	240
ctcaactctc	cgcaacctcaa	gcacaagggg	tcgcacatcc	agggcgactt	cggcgactac	300
aagccgctcc	attctctcgt	ggacgccaag	ctccaggcca	tctgccagga	catggccgag	360
aaaccagc						384

<210> 1280

<211> 341

<212> DNA

<213> *Eucalyptus grandis*

<400> 1280

gtcaactcgg	tggttcgagct	gcacaagctg	ctggcccgc	cggggcgcat	cgagaaggtt	60
ctgggcgtgg	tcggcgagct	gcggccggcg	atcgtagcgg	tggtcgagca	ggagcccaac	120
cacaacgggc	cggtcttcgt	ggacgcgcttc	aacgagtccg	tgcaactacta	ctccactctg	180
ttcgactccc	tggaaggctg	cgccagcagc	caggacaagg	ccatgtcgga	ggtctacctc	240
gggaagcaga	tctgcaacgt	ggtggcgctg	gagggcgcgc	accgggtcga	gcgccacgag	300
accctcgccc	agtgccgggt	ccgctcgccg	ggcgccgggt	t		341

<210> 1281

<211> 295

<212> DNA

<213> *Eucalyptus grandis*

<400> 1281

tgactttcaa	tgagtttccg	aacacatgga	gtggactttc	taaggatatt	ggatccatca	60
acatgggatga	gttctctgaag	aacatatgga	cagctgagga	gagccaacta	cagctacaga	120
acatggcgcc	ttctgtgta	ggagggggaag	gaggtggtca	agttagggaat	ttgctgagac	180
aggggtcatt	gactctgtcg	cggaactatta	gtcaaaaaac	agttgatgaa	gtgtggagag	240
aattattcaa	agagacggag	gatgtgaaag	aaggagtag	agaaggaggt	gacat	295

<210> 1282

<211> 365

<212> DNA

<213> *Eucalyptus grandis*

<400> 1282

tttttttttt	ttttcaagct	aagatcaaac	caaaattaaa	aaagaatttc	acagtatttt	60
tatgcaaatg	caatgacac	ttatcaaggt	ttaccaaatg	ttgaaacaaa	ttatacacac	120
ggctgtaggc	atccatgaaa	tcacgcaggc	aaaaccgcgc	gctcattttc	acgactgcct	180
acctgctcgc	gggggttatt	caaaacctcg	aataccttag	tgcaagcacc	tgagaattcc	240
atcaatgcct	taaaaacgcg	aggcaggccg	ttcttgaggg	gggtcagtcg	catggccttg	300
gtgaactcga	cgaaaacgcg	atacttggen	ttcaatcgt	ccaaccgttt	tttnagggcc	360
tcgat						384

<210> 1283

<211> 428
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1283
 ctccgagcag ctcaaaactgt tcatgaccac gtgcgcgtcc tctgaatcct tgcactgat 60
 ctcttcgccc caaccgctcg cccctcggc ctctccaact tctcccccgt ctccccatt 120
 gccaaacgcc ctgcgcgcct ctgcgcgcgc tgcctgtatc tctgctgcgt ccgtggactc 180
 cggcagcggc agccgccatg ccgagtcggc gaaattgagg caacgcgcgc gcccgcgag 240
 cgccagcgca gccacgtcgt gggcccgggc ggccatctcg ggggtcgggc acgtcccgag 300
 ccatatccgg gtctctctgt tgggctccgc gagctcgac acccaactgc cgttgttctc 360
 gcgcgggacc ccccggtaca cgggggtggc ggtctccttg aacacgaccc gcccgggccg 420
 ctctctcg

<210> 1284
 <211> 532
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1284
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 tctccagcca gggaaagggc agggcgcgga cggcgacggc gacgatcctc ccattctcca 120
 ccagctgac ctctcgctcc atcgtcgta tgtacggacg ggccggcgag tggagccgct 180
 acgaggacaa ggtctctcag caacgcgtcg tggcggtggc ggaggactcg cccgaccggt 240
 ggacgtgat cgggaacgcg ctgaaccggt ccgcgtcgca agtggtcgag cactaccaga 300
 ggctggtgga ggaattgac gcgatcgagt cggggcgggc cgagcccgcc agctaccgcy 360
 acgaccaccc ggccagctgc ggccagattg ccttcgagac gaagccccgg atcaaggagg 420
 cggagaagaa gaagggaac ccgtggaccg aggaaggaga cagggtattt ttgctcgggc 480
 tgcagacctc tggcaagggc gactggagga gcatctcgag gcactttgtc ct 532

<210> 1285
 <211> 349
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1285
 aaagtcccg gatgccgcga cgcgaattcc cctctcgaat gcgctcgga ttcgagcgat 60
 gatcgagcg gcgaccaaacc agatcccgcc gcgcgcgcgc cgcgcgcgac cgcagcaagc 120
 cgcccgccgc gcgcgcgcga tccgggtccc cgaactccgc tacaacgcgc tcagggtggg 180
 cgccgtcttc cagcggtcgt cgaagcaact cgccaccatc ggcaagggct ccggcctgtc 240
 ggcatcttgc ggtacttcca tggagttcct gaactcgtgc ctctgcctcg ccagaggcat 300
 tgactatgag gtcgcgaaca atgaggttct gcccaaaact cagcaattg 349

<210> 1286
 <211> 350
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1286
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 catggagctc aaggtgatgg aagacgctag caagtccgag gctcactcca tatcggtcgc 180
 ggctctcgtg gaaggtggag tccaagaggg ctgcgaggat gcttgcaaga ctgcgcttga 240
 agcttctcgc gacagcgaa catctacggt gaccacttgc aagcacgagt atcatcteca 300
 gtgcattctc gagtgggtgc agaggagttc acagtgtccc atgtgttggc 350

<210> 1287
 <211> 344
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1287
 gaaggttggg acatctgggt gagcaggccc ttgtcctgca aacagatgca tgtatgcttc 60
 ataactctat agatatggaa atgtcactgt acactgatca tcaatgtggg aaagaacaca 120
 tccccctgtc aactttgcag attttacaat cacataatga tgaagtgttg cttgtgcaat 180
 tttcacataa tgggaaatat ttagcttctg catccaatga tcatcagca atcattttgg 240
 aggttgatga gaatggcagc gtctcattga agcataaatt gactggtcac cagaagccga 300
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<210> 1288

<211> 359

<212> DNA

<213> *Eucalyptus grandis*

<400> 1288
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 ccagatgaac cgtggagaaa caaaatcgaa gtctcatcaa aaggatccgt attgacctaa 180
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 agttaacaaa ttgaaagctg aatgtgcagc tcttatgaa gaatctcctg agctgatgca 300
 ggagaagaat gagctcagag aagagaaatc atctttaaaa tctgaagttg aaaaacttta 359

<210> 1289

<211> 381

<212> DNA

<213> *Eucalyptus grandis*

<400> 1289
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 accaccacca ccaccaccac caccacctta tactgtacaa ataactccct ggctccgcgc 120
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 ggtcggcaat ggcttctctc tcttctgtag ctctcgcgag gaaggacgcg gatcggatca 300
 aggggcgctg gagccccgag gaggcagagg cgtgcgagag gctgggtccag agctacgcgc 360
 cccgcaactg gtccctgac a 381

<210> 1290

<211> 330

<212> DNA

<213> *Eucalyptus grandis*

<400> 1290
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 aaaaaccagc ccccggaatc gccccgaaag aaggtcggac aagcaagatg gcggaagagc 180
 accggtgccg ggccccgcgc ctctcgcgca acaactgcgc ctctctcgcg acgccccgca 240
 ccaggagatt ctgctccaag tgctaccgcg acctccagct caaggagcag cagtctccca 300
 acgccaagct cgctttcaac cagaccctgt 330

<210> 1291

<211> 296

<212> DNA

<213> *Eucalyptus grandis*

<400> 1291
 gcagccgagt cgagcaagaa actaacgaac gcccggtgtc attaggattc ataattccaca 60
 agaacaagag aaaaaaggat catgggaaga tccccatgtt gcgaaggcaa tggcctgaag 120
 aaagggccct ggtcttctga ggaagacaag aagctccttg attttatcca gcagcacgag 180
 catggagctg gatctctctc cctaaccgtg caggtcttaa tagatgtggc aagagctgca 240
 gattgagatg gataaactac ttgtggccgag acatcaagag agggagtttc tccccg 296

<210> 1292

<211> 355
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1292
 gccaaagacccc tggccggccca caaggcgccc atctccgccc tcaagttctc gccggacggc 60
 aaactctctgg cctctctctc cgccgacaag accctccgccc cctaactcac cgctccctc 120
 gccccgctcc acgacttcca cggccactcc caggcgctct ccgacctggc cttctccggc 180
 gacacccgcc tctctcgccc gctccgacg acaagaccct ccgcctctgg gacgtcccca 240
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 cccccactcc aaactctctg tctccggctc cttcgacgag accgtccgcg gtctg 355

<210> 1293
 <211> 362
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1293
 cccctctacc ccccaagccc cccaagccgt cctcgtccac cctcagctcc gcgccccgg 60
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 gctgggggac ttcgacacgg cgggtggagg cgcaaggccc tacgacccgc ccgcgtttag 300
 gctccgcggg agcaaggcca tctggaactt cccgctcgag gcgggacgcg acgagccgac 360
 gt 362

<210> 1294
 <211> 360
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1294
 ctctgcccga cgggagaggg gccgacaaat gaaaaggagg cggaggagga gatgacgatg 60
 ccgatgccga tgcggatgat ggaaccgatt agcccgtaga gaggaatcgg attgctttgc 120
 cggaaacaaga gatttgcgca cgacgacgac gacgacgacg acgaataagg aggaaaaaag 180
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<210> 1295
 <211> 344
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1295
 cgtctctctc gtacacctct ccctcttctt cctcttctac aagcacccgt cccactatgc 60
 ttgcccgaac ctccccccgg gacgactcgg cctcccgctc atcgccgaaa gcctcgaact 120
 cctctccacc ggggtggaag gccaccogga cgggttctat ttcgacccga tcgcccgcct 180
 ctctctccac gtcttcaaga ctctccctct cggggagccg gccgccatct tctgcggcgc 240
 cgccgcgaac aagttctctt tctccaaaga gaacaagctg gtggctctgt gtggccctaa 300
 ctccgctaac aaggtctctc ctctctccac ccagacctcc tcca 344

<210> 1296
 <211> 287
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1296
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 cccttgggtct gttctctctt gcactgacga cgttcattct ctccctctac aacgtcaatg 120
 cgcgtgaagt aaccaccccc aatgttgtgt tggcattggc atcttctgtg gaggcccttg 180

tcaagctctctc	gctggcgatgt	gggagtttcc	tgcgggcaac	acctttggag	caacggcttt	240
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<210> 1297

<211> 557

<212> DNA

<213> *Eucalyptus grandis*

<400> 1297

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gcacatgggt	tctgtctacg	cagcaagaag	aggccggggt	ccgatgatgc	cgatggcggc	120
gaggacgcga	tgggtggggc	caagaacacag	atgatctccg	gccccgtggc	gggggtgtgg	180
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gacacatcgt	ggcgtccacg	gcgctgtacg	gcgggaccca	cgccctctcg	acccacttcc	300
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cgccgcgcgt	gggtccagggc	cggaccaagg	tgctctactt	cgagtccgtc	tccaaccoga	420
cgctgaccgt	cgccgacata	cgggagctct	gccggctggc	ccaacgacaag	ggcgtgacgg	480
tggtcgtnga	caacacgttc	gcgcccgtgg	tctgtctccc	ggcccggctc	ggcgccgacg	540
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<210> 1298

<211> 500

<212> DNA

<213> *Eucalyptus grandis*

<400> 1298

gggcatacta	aggcaatoga	ttctgtgtgt	tgggattcta	ctggcgattt	aattgcgtct	60
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catgaattga	ggtcgaatgg	aaacaaggcc	cactcctgcg	tgttccaccc	aacttatcct	180
tcacttttgg	tgatttgctg	ctaccanacc	ctggaagctc	ggaaatatgc	cgagaacaag	240
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ggcctgggtt	cttcaagctc	tcacgacaag	acagtgaagc	tgtggaagtg	atactttggc	360
atctccaggt	atttttctta	agcaactcaga	ttggaagact	gaaatcgctg	ttcccatcaa	420
agtgcagtga	tcttgcctct	gtatcaagtt	gcctcagtae	gccacgttgg	tgctcgtctc	480
actgatacta	atttatagtc					500

<210> 1299

<211> 444

<212> DNA

<213> *Eucalyptus grandis*

<400> 1299

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agtgacagtg	cgagagcgat	cccgaaggac	gcaacaggac	ccggggccctc	aagtaacaag	180
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ggaagaccgt	cccggctctg	caccgggaga	ggagtatctt	cttcatcatc	aaggccctcg	300
cgccgggggt	gatcctgtcc	accgggttca	tacaagctct	cccggagcgc	ttcgagaact	360
tgacgtcgcc	gtgctcgagc	gagacccctg	ggggggattt	cccgcttcgcg	gggttcgtgg	420
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<210> 1300

<211> 547

<212> DNA

<213> *Eucalyptus grandis*

<400> 1300

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gtggagggtg	tcaagctctt	gcttcacgca	tctgccgatg	ctaattgcac	tgaatggcaat	180
ggaagaagc	caattgatgt	gatagccctt	ccattaaagt	cacgcggcga	ttcaaggagg	240

aagctgatgg	agctgttgct	gaaagggcgt	aattctgatg	gggaatttga	atccccagag	300
gagaagccga	ttgcgcgacc	gcaagcatcc	aaagagggaa	gcgaaaagaa	agagtatcaa	360
tttctgttg	atatctctct	gcctgacata	aattgtggga	tttacagttac	tgatgagttc	420
agaatgtatg	ctttcaaaag	aaagccttgc	tcgcgggcat	actcccatga	ctggacagag	480
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actgcgt						547

<210> 1301
 <211> 483
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1301						
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gattactcgt	acaaaaagct	aactcagctc	tgccaatttt	cccatggagg	gggaatctta	180
cttcgagaaa	gatgaaaaat	attctaattg	ctcaatcttg	ctcgaattat	ctgcttcgga	240
cgatctccca	gcttttgaaa	ggaaagcgaa	agagaagggc	tgtaacattg	atggtgctag	300
cttctgggtac	ggtagaagaa	ttggctcaag	gaagatgggt	cttgaagaga	ggactcctct	360
catggtggct	tccttgtttg	gaagctctag	ggttgtgaag	tacattctcg	aatctggcaa	420
agtcgatgta	aatagggctt	gtggttcgga	caaggtcact	gccttccact	gtgctgttgc	480
cag						483

<210> 1302
 <211> 368
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1302						
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tggaataaaa	attcaatatg	agaagatggg	taaaaattgt	tgcaattcat	tttcagggat	180
gctgcggttg	tttgcatatt	ggcgacgtgc	ttgttcttaa	tcttgacagt	atggttttga	240
gaactcttgc	gaccaccggc	caaggacctg	gcccgaggga	cagtcacagt	ctgtttcttg	300
tggggcacag	gatggtttgt	tttgggggta	ccaacggtct	tagaaaaggt	aatgaccttc	360
atgtactg						368

<210> 1303
 <211> 348
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1303						
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acagcgcccta	cgaacttcgg	tacttggtca	aggccctcac	ccgcgcgag	ctccccggcg	120
acctcccgga	gttctccgcc	gtcgtgcggg	tggttctcgg	ggaccgggtg	tacgacgtga	180
agacactcat	cggttctctg	cacagcctgc	acggcgggct	ggaccgggtc	gccgcggccc	240
tggaacttga	ccgggcgggt	ggcaagtgc	accaggccgg	ttccgacagc	ttgctgacgt	300
ggcaagcgtt	cagggaagatt	agggaactct	acttcgccaa	cgacgacg		348

<210> 1304
 <211> 349
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1304						
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acatggcgcc	ttctggttaac	ggaggggaag	gaggtgtgtca	agttagggat	ttgctgagac	180
aggggtcatt	gactctgtcg	cggaactatta	gtcaaaaaac	agttgatgaa	gtgtggagag	240
aattattcaa	agagacggag	gatgtgaaag	aagggaagtag	agaaggaggt	gacataaatt	300

tgccacagag gcaacggact ttgggagaga tgacattgga ggagtctct 349

<210> 1305
<211> 354
<212> DNA
<213> *Eucalyptus grandis*

<400> 1305
cgctgacag gggcgctct gcgggggctg cgaccacgct gtccaccacg ccaacaagct 60
cgctccaaag caccacgggt ttccctctct ctgtcctctc cetaaggaat tccctctctg 120
tgacgtctgc caggagaggg gagcggtctt gttctgtcaa caggacagag ccattctctg 180
caggaggtgc gatctccgca tacacaaggc caacgagcat acccagaagc acacaggtt 240
ctgtctcagc ggggtgaagc tctccaccac gtccgaagtc tacacgtctg ccggcagcag 300
tgctctctg tccaacggat gcgatttcgt ccccgacttc aaagtccgaa gcat 354

<210> 1306
<211> 513
<212> DNA
<213> *Eucalyptus grandis*

<400> 1306
caaaagacttg ctttctctaca tgcacattct gtatgagatc tgcccctact tgaagtttgg 60
gtacatggcg gcgaatggag ccattgcoga agcatgcaaa aatgaggatc ggatacacat 120
catagacttc caaattgtctc agggcaccac gtggaccact ctccctcaag cggttctgtc 180
aagacctagc gggcccccctt atgtgcggat tacagggatt gatgaccggg tcaacaggta 240
cgctcgtggg gcgggatttg aagcagttgc aggaaggttg gcggtgatct ctgagaaatt 300
taagatcccg gtggagtcca acggtttgcc ggagtttgcc ccaaatgtta ctctgtacat 360
gcttgatgtc aggccggggg aagctctcgc agtgaacttc ccaactccagc tacaccacac 420
gccagacgag agtgttgaca tcccaatcc aagggaatgg ctactaagga tgggtgaatc 480
gctttctcgc aaagtgtaca cattgatcga gca 513

<210> 1307
<211> 348
<212> DNA
<213> *Eucalyptus grandis*

<400> 1307
agcagctccg cgtcgtgcg gggcagcagc agagcccgcg gagcgtcgag tcgctgtctc 60
gtctcccgcg ggcgtgcgcg atgtcgttt ctgtgtccg gtcgcccgtt cgggcgggac 120
cgtatggcgga gatgtgcgc tccctcagga acctcgagct cgacaaagtg aagtccatgc 180
cttgcggcgg gtccacttcc gggtcgcgga gggcctccag gatccgaccg gggttctaca 240
gcatgccac gagccgcgca caatccacc cgacggcgcg cgggctgggg tgctctggatt 300
cctgggagag cccttacgag gaagaaccg cgatggagaa ggtggaat 348

<210> 1308
<211> 345
<212> DNA
<213> *Eucalyptus grandis*

<400> 1308
ggaaagagaga aggcagcttt cccgtataaa acccaaaccc ctccaaattc tcccccaat 60
tctccagcca ggaagggcg agggcgcgga cggcgacggc gacgatcatc ccattctcca 120
ccagctgatc cttccgctcc atcgtcgtca tgtacggagc ggcggcgagg tggagccgct 180
acgaggacaa ggtctctcag cagcgctggg tggcggtggc ggagagctcg ccgacccggt 240
ggcagctgat cgggaaccgc ctgaaccggt ccgctgcgca agtgttcgag cactacccaa 300
ggctgggga ggacattgac gcgactcgag cggggcggtt cgagc 345

<210> 1309
<211> 337
<212> DNA
<213> *Eucalyptus grandis*

<400> 1309

cattagagct	gacctctgaa	agtgttaagc	atgggtcaca	atctgggtcaa	gaaggcagca	60
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agaaaaatgt	taaaaggaat	gaatttggtc	gtagctatta	cagatgcacg	catccaaact	180
gcctctgtgaa	gaacaagctg	gagcgctcgc	gtagaggccg	gattaccgat	aactctact	240
taggcgagca	taatcatgct	agccacaga	agcactacc	agtggctgtc	agctttgtgtg	300
tgtctatagt	tgaggagaaa	ccagagaagc	cttcccc			337

<210> 1310

<211> 383

<212> DNA

<213> *Eucalyptus grandis*

<400> 1310

gcccccttta	ctttgttctc	tctctcccc	tctctctctc	gccatcgaaa	tcgaagagcc	60
gcctctctct	ctctctctct	ctcttttcca	agaagatcga	gaatttggtc	acctctcagc	120
atctgactta	agttttagtc	gaaggagggg	ttgcgtgatt	cccattgtat	gaagtgggaa	180
acgggagttc	ctttaccacc	atgtgcatcg	agtcgcaatt	ggtttttcaa	cgaggaggga	240
aggaccgcga	aatggaccgc	tgccgagaac	aaaatgttcg	aaaaagcgct	ggcggtgcac	300
gacaggaca	cgccggatcg	gtgggatagg	gtcgccctcga	tgatccctgg	gaagacggtg	360
gaggtgtgg	ttaagcacta	tca				383

<210> 1311

<211> 455

<212> DNA

<213> *Eucalyptus grandis*

<400> 1311

gttcacggcg	ggctacgggt	cttccacatc	tacctctctc	ctttctctcc	ctctctcttc	60
ttcgtctctc	ctctctctct	tcgagccggt	gtcgttctcg	gatgggtgct	cgacaagccc	120
cgacctctcg	ggctctcgagc	taccgggtcc	gatcgggctc	aaccacctca	ccccatctca	180
gatcaaccag	atccaaagcc	agatccagtc	ccaaagcagc	aacttgcctc	cttaccatgg	240
ccacggctac	cacccgagca	tgcttctggg	acgaaagccc	gtgtccatga	agatctccgg	300
gtcggcgggc	aaacggcgca	cgaagctgta	ccgggggtgt	aggcagaggg	attggggcaa	360
gtgggtcgcc	cgagatccgg	ctgccaaga	acaggaccgg	cctctggctc	ggcaccctcg	420
acacggctga	ggaagccgcc	ctcgccctacg	accgg			455

<210> 1312

<211> 472

<212> DNA

<213> *Eucalyptus grandis*

<400> 1312

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gcgccttcgg	ctcgtctgct	cgataatggc	agattctcct	cgcaagaagt	attcaagatc	120
ccctcacctc	tgagagagat	aatcaaggtc	taggtcgaga	tccaggtcta	ggcccccaac	180
ctggatcaag	caccggccaa	gggtcacggc	cagaagccat	ggcagatcaa	gatccagaag	240
tcatggcaga	tcagtggtat	agaacaatcc	tggaaaacga	ctttactgtg	ccggtttatc	300
cactaggggtc	actgaagggg	acctagaaga	ccacttttca	aaagagggga	aggttgcttc	360
gtgctttctc	gtgggtggagc	ctcgcacacg	catctcccg	ggttttgcgt	ttattaccat	420
ggagactgct	gaggatgcta	accgctgtgt	caagtatctg	aatcaagctt	gt	472

<210> 1313

<211> 384

<212> DNA

<213> *Eucalyptus grandis*

<400> 1313

gcacagctcta	acctgattac	ctacaaagga	cctaccatga	ttgcttgtac	actgcaagca	60
atcgcatat	tgtaaaagga	gagcttggag	tgggttggt	ttatcaactc	cagtgtctca	120

gattatctctc	tggttaacgca	ggatgatctg	ctttacgtgt	tctccaacgt	atctagaagt	180
cttaattttca	ttgaacatga	tcagattttc	ggatggaaat	tgaacacacg	atctaaatca	240
atcatcatcg	atccagattt	gtacctgtca	aagaagtatg	aagtaacctg	gagcaactcaa	300
cgtcgatcag	ttccaaacatc	tttcaagttg	tttactggat	cagcatgggt	aatggtaact	360
cgctcttttc	tcgagtattg	tata				384

<210> 1314

<211> 428

<212> DNA

<213> *Eucalyptus grandis*

<400> 1314

ccgcggcgac	gacctctctc	ggcgtctccg	ggaagggtcca	cgagtgtctg	atctgccaca	60
agagcttccc	caccggccacg	gcgctcggcg	ggcacaagcg	gtgccactac	gaggcccccg	120
cccccatccc	cgctctcttc	tcgcccccct	ccgcgcgcgc	cgccccggcc	gccagcgggg	180
tgagcgtgtc	ggaggcgctg	gggtccacgc	acacgcagag	ccaggggcac	cgcgagttcg	240
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acgacnaggt	ggagagcccc	caccctccca	agaagccccg	gttctctggc	ccggcggtga	360
agacggaagc	ggcctgaaat	gggtcggatc	gaaaacgcac	agaagccaaa	ccaaaactct	420
gcgagact						428

<210> 1315

<211> 140

<212> DNA

<213> *Eucalyptus grandis*

<400> 1315

ccaagggcgc	ggcgggtcac	gagggcgagg	gagcgaggag	cgagctgaag	ttcatagggg	60
tgcggaagag	gaagtggggc	aggtgggtct	ccgagatccg	cctgcccaac	agccggggaga	120
ggatctggct	cggtctctac					140

<210> 1316

<211> 502

<212> DNA

<213> *Eucalyptus grandis*

<400> 1316

gtaaaaaagg	ggcagccctc	tgctctgtct	gaattgcgct	ctctcgtctac	ttctctgggc	60
ttctttttct	ttgcttccct	tccttaaaat	ctccctctcc	ccgtttcttg	tctggttttt	120
ctgggtgctc	tcgctttttc	ctgctgaagg	agtgaagttg	accgtcgggt	tcctttcttg	180
atctccaat	tcgatcgtca	gctcctcgtg	tcgacttttt	tcgggtttcc	tgctggcaat	240
gttcgattcg	gattcctcga	cgggaatggg	agtaacatca	acttcaagaa	cttcagcacc	300
gattccgagc	cgacgaataa	caggcctcct	ggcaacacgc	tgtaaccctg	gcaaccgctg	360
gtgtacacgc	tgacctttga	ggagttccag	aactctatat	gcaaggactt	tggttccatg	420
aaactgggat	agctcataaa	gaacatttgg	tctgcagagg	agaaccaatc	tatggcatct	480
gctagtggcg	cttgtgtgtg	cg				502

<210> 1317

<211> 365

<212> DNA

<213> *Eucalyptus grandis*

<400> 1317

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tgacgtctgc	caggagaggg	gagcgtttct	gttctgtcaa	caggacccgag	ccattctctg	180
caggaggtgc	gatctcccca	tacacacggc	caacgagcat	accagagaagc	acagcaggtt	240
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gtcca						365

<210> 1318
 <211> 372
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1318
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 gcggcgatcg ggggcccccg ctggcgccgt tccctcagca atgtgtggagg 180
 cgaggcgac cgacccccat atcgcgctgg ggagcgccgg cgacacccctt gtcctctggg 240
 acatactca attcaccctc cagttgtctc cccactactt caagcactcc aacttctcca 300
 gcttcatgcg ccagctcaac atctacggtt tcagaaaagt tgattcagat cgttgggaat 360
 tcgcaaatga tg 372

<210> 1319
 <211> 363
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1319
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 cagtgataca gaaaactcag ctctctgggga aggaagtaata gctgctggaa cagaaagggga 180
 gcgtgtgatt tctggggatg atgctgtctg ttgcataatg ttagcaaaat atgcaaaaca 240
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 atc 363

<210> 1320
 <211> 401
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1320
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 tgagtcacat cacttgtccc ataaaccttg tattgtagtt ctgtgttttc acggccagta 240
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 agctctctta ttctgtcgat cagaatttga tcttttttca cagcaatacc ctccaagctc 360
 atttccaatt ggttttccaa attctgtagt tcttttacgc t 401

<210> 1321
 <211> 364
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1321
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 aggatcatcc tgcagcaagg ttaatggtgg ctcttcaaga attgaacttg gagtgtcaac 300
 atgctagtgt ttctgtggtg aacgagctca tgatcccaa gccacagtta agatggggag 360
 tcag 364

<210> 1322
 <211> 413
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1322
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 actacaacta gtacaaaact ttacagactc gtcaaaacc ccaagtttca ccaccacgca 180
 gaagaagtgg ccatagctcg attctctcac cagagataaa gagctccatc cttctcttcg 240
 attctataat tctctgtata ttcccttaat agatttctga cagcatcagt aactgcagaa 300
 ctcaatggga actgttgaaa ccgagccatc ctaaaccttg acctccattt ccccaaaagt 360
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<210> 1323

<211> 382

<212> DNA

<213> *Eucalyptus grandis*

<400> 1323
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 caagcgaggg gtccgaataag tgccggaagg agaggaggaa gactgtgaa ggagacgaca 300
 tctgctgggc gatgcaagcc ctaggcttcg acgactatgc gagtgtcttg agggaggtacc 360
 tgcataagata tagggaaata ga 382

<210> 1324

<211> 377

<212> DNA

<213> *Eucalyptus grandis*

<400> 1324
 gcttacaggg cctgcttggt gggtaattc ttttcagct gatctcgtg tcttaccggt 60
 tatcctcttc tctccaaact ctctggttct ctgttcggcc aaagaaatgg ggagacatgt 120
 ttgtctgttg aagcagaaag tgagaaaagg gctatggtcg ccgagggagg acgagaagct 180
 ctccaactac atcacccggt tcggcgctcg ctgctggagc tctgtaccga agctcgcgcg 240
 taagacatga tgacagacgg gaaaggagaa gctcatcacc agttgttttc tggggaataa 300
 gttctgtctt ttgggagaaa ttgatttga aaacctgtg aatgatcgaa tctctctgtc 360
 gaatgcacga ctccaga 377

<210> 1325

<211> 305

<212> DNA

<213> *Eucalyptus grandis*

<400> 1325
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 acagggcgct gcggagggcg cgggtgggca agtacaccgc cgagatcagc gaccccgcta 180
 agaaggccgc cgtctggctc gccaaccttc cctccgcga ggaggccgc gcgcctacg 240
 acctcgcgcg cgtccgggtc cgcggctcca agggcaagac caactctccc gcctccctct 300
 acgac 305

<210> 1326

<211> 288

<212> DNA

<213> *Eucalyptus grandis*

<400> 1326
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 acttctcata ttcagagtcc gatcgtcgga gctcggcgcg ttcgataggg aattggctgg 120
 cttcaggttc ctggggctcg tgccttggat gttaaagctg tagagactga atcgagatg 180
 gatggttcgc aagaaaaatc gaatgctcgc gctccgttcc tgggtcaagg catagagatg 240
 gtgcgatgac ctcagacgga cttcctgggtg tctcggagcg agagcgga 288

<210> 1327
 <211> 190
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1327
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 cgctctcaacc agcggcgggc gcggggcgga gtccggcgcg cggttcgctca cggcggtctca 120
 gccggagata atgaggggcg ccgagaagga cgaccagtac gcctccttcc tctacgacgc 180
 ctgcgcgcac 190

<210> 1328
 <211> 259
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1328
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 gcgcgcgcgg ggtcggtccg gaagtcggag gaggagtgcc agcggtctct gtccgcgggag 120
 gaattccgta tctcgaggca gaaggggacc gaataatccag gcacgggtga atacacaagt 180
 tttctgaaga gggggtgtac aattgtgcag gatgtgggac tcctctttac cggtctacaa 240
 ctaaatattaa ctccgctgc 259

<210> 1329
 <211> 381
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1329
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 aggccttga gggaaagccaa ccggttgatc tgtccaaagca tccttcagga atcggttccca 120
 ctcttcagaa catagctctca acagtgaatt tggactgcaa attggatctt aaggccattg 180
 ctttgcgaag tagaaatgct gagtataatc ccaagcggtt tgctgctgta attatgagaa 240
 taaggagacc aaagacaacg gcatgtgat tgccttcagg gaaaatggtt tgtactggag 300
 caagagtgta acaacaatca aagttagcag cgcggaagta tgctcgaatc attcagaaac 360
 ttgatttccc ggctaaattt a 381

<210> 1330
 <211> 347
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1330
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 gaaaacgacc ccggaagacc tccgctcccc gcggcggaag atggcgggca gcgacgcgaa 120
 gatcgggagg aggttagagg gcaagggtgc catcgctacc gcctccacgc agggcatcgg 180
 cctcgcacat gccgagcgcc tcggcctcga agcgcccgcc gtctcctatc cctctcgcaa 240
 gcagaaaaat gtgatgagg ctgctgaaaa gctcagggca aagggtatag aggttttggg 300
 cttggtttgc catgtttcca atgcacagca gaaggaaatc ccttgtt 347

<210> 1331
 <211> 337
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1331
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 aagcgcgtgc tccgcgagct caactccctc atcgcggggc cctcctccgc ccgcgcgcgc 120
 gccccgacg acgcgctcga cagaggagtc accgacacgc agtggttctt cctcgtctcc 180
 atgacgcagt ccttcggcaa cgacggcagc ttgcccggcc aggcctctga cgggtcgacc 240

ccgctttggg tgtcggggcg ggaccgcctc gccagactgcg gctgcgagag ggcgaagcag 300
 gcgcggattt tcgggctcaa caccatgggtc tgcgtcc 337

<210> 1332
 <211> 325
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1332
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 cttaatcaga ggttttaacg cctcagggcc gtgggtccaa atgtatcaaa gatggataag 120
 gcttcaactgc tccaagatgc ggagtcttat atcaggggagc ttaacatgaa cctacaagct 180
 gcagagctcg ataaggagga tttaagaagan cagtgggatg aactaaagaa gcgcatcatg 240
 gataaagaat gtatcccggt ggatcaagat cgcaagatgg caaaacctac gggaaagtagg 300
 tccactgggg tggcaatcga tgtga 325

<210> 1333
 <211> 362
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1333
 cagcatcatt ataattgcc tgaagagaat cgactcggcg atcacgattt acattagttt 60
 cgccctccct ttcgcttgct gcacctgtgc aagcctttga cttcgtagag tcatgtgcgt 120
 tccttgggga cccctctttg tagctgggtg agcagggggg gctacaacgg atgcttggga 180
 gagtgatatg cgcgtctcat cagatgagaa accgggaata cgaattgtgt ggttgcgttc 240
 aaggtgtagt tgcaggtcgc gcaactccaa agtgtcccca ccgcgatgct tagccaagcg 300
 acacgcaaa tttggtgacgg aatcgatgaa ttcatcagca atagaaagca ggagatcttc 360
 ca 362

<210> 1334
 <211> 216
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1334
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 cctttattac agtgtgcacg acaccaacac aggttttcag gtcactgtgg ttggttatag 120
 tcacaagcta aggatattgc tggaaaaagt catcgagaaa attgcaacct ttgaagttag 180
 acctgagaga ttgttgtga tcaaggaagt ggtgac 216

<210> 1335
 <211> 326
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1335
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 gatgaagaag aagctgcaca acacggcgaa gtcattcatg actgaaggga aggtgtcgcc 120
 ggatcccggtt gcaattgatg ctccctggggg atttcttttt gagggtggtt cagltctttt 180
 ggatataatt attgcaagga ctaacgagaa acattctgaa gctgctcgac catatattga 240
 ggcacaacaa ggtaaagcaa gagagcgaca gcagcagcag cagcagcagc agcagcaaca 300
 gcaactgcag atgcaacaat tgcac 326

<210> 1336
 <211> 382
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1336
 aaacaatcga taatctcttc ttccatcttt cctctctctc ccccccttga aatcccgat 60

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ccaccaccac aacccccccac cgccacacctgc tcgttggttaa tctctctttt gctctctggag 120
agggaagtga agtgatctcgc gatcagctga ctttggagaa tgatcctaaa gctggtatatt 180
ctacattgag atcatctctta agagcgctgt ggttctctga tggcatctca tccatcaaat 240
cattcgctgtg ggccgcccctca tcaaggtgcg ttgctgatg ctttatataaa agagctgtgtg 300
catgctctgtg ctgggcctct tgtcaccctt cctcgagagg gagagcgtgt ctattattttt 360
ccacaaggtc acatggagca gc 382

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<210> 1337

<211> 322

<212> DNA

<213> *Eucalyptus grandis*

<400> 1337

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cgatcgcttt tggaggatgc ttcggggaaa ttggaccgaa gtttcgattt ttgacaggcg 120
agatcagctg aatcgggaga tcagaataat ggagctctcac gatgagacag gatgccaggc 180
cccaaaaggc ccaatctctt gcattaaaca ctgctggttc ttcgggaagt ctcgccaccgc 240
caatatgtgc tcaaatgtgc acaaggacgt gatattgaaa caagaacagg cacaagcagc 300
tgctctctcg attgagagca tt 322

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<210> 1338

<211> 536

<212> DNA

<213> *Eucalyptus grandis*

<400> 1338

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gttcgacgag ttcacacgca gctgacaaat cattgatcat ggagcatgag tttagtctcg 60
ctaaaatcaa agctctctct gagattctac agtcgcaatg cagaggagaa agtgcaaatg 120
cagagcttca tggctccatc ggctgtgacg atgagtctct ttttgaaaat acaggcacgc 180
gggattctac atacagaggt aaagctgtta agcaccacaa tggttattca agtctctctc 240
ctgaaggacc aattaaagca attgtctttt ctcaagtgga gagtatgtta aactctggtg 300
aacaaaatct gatccattt ggcaataaatt atagacggct tgaaggaaaca atgacccctt 360
ctgcaagaga caaagctgtg aaagattttta acaccgatcc tgagatagtc gttattgctaa 420
tgtcattaaa agcaggaaaac cttggtctaa acatggttgc tgcttgtcat gttattcttt 480
tggatctttg gtggaatcca accactgaag atcaagctat cgatcgagct cataga 536

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<210> 1339

<211> 438

<212> DNA

<213> *Eucalyptus grandis*

<400> 1339

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cgacttcaag gagtaccgac ttcgctgcga gctgcgcggc cagaggagcg atgtccgggg 60
cgtatcgctg tcgcggggag gcagcatcgg gacctcgtcg cgggagtcgga cggtgaggct 120
gtggctctcg agcgcggcgc agagggcgcaa gtacgaggtg gcgaaggtgc tgttagggga 180
caagagcttc gtgggtcccc tggcgtgggt tccgccacgc gaggagcttc cggagggcgg 240
gatcgtgttc ggccgggatg acactctcgt gatggcttgg gatttgagga atggagaggc 300
cgagacgttg aaagggccatc agttgcaggt caccggcatc gtgttgagcg gcggcgacat 360
ttgtttctgc ctcttggtga ttgtacctta ataagatgga agaattggcca gcttacggag 420
cactgggagg ctcatata 438

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<210> 1340

<211> 533

<212> DNA

<213> *Eucalyptus grandis*

<400> 1340

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ctttggaggc cctcagctcc cccaccgctc cctccgcccc gttccaattc atgaaggact 60
cctccccgcg cgccgcggcc gccgcctctc cctcctctc cgcctacgac ctccccctcg 120
ccgagccctg ggccaagcgc aagcgtctca agcgcggcca caaccgcgcc ctcaggagcg 180
agtcactcgc cctctcgcct atcatgctcg ccgcggcgcg ccgcggcgcg accctccccc 240

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cgcgcgcctcc	ccccgcggtc	tcttcgcagg	cggccaaaggt	ggcctacagg	tgccccgtct	300
gcgcaaaagg	cttccccctc	taccaggccc	tgggcggcca	caaggccagc	caccgcgaagc	360
acgcctcctc	cgcctcgccc	gcgcggggg	gtgacgacca	gcgcaccacc	tcgagcacct	420
ccgcggcgac	gacctctccc	ggcgtctccg	ggaaggcca	cgagtgctcg	atctgccaca	480
agagcttccc	accggccagg	cgctcgccgg	gcacaagcgg	tgccactacg	agg	533

<210> 1341

<211> 363

<212> DNA

<213> *Eucalyptus grandis*

<400> 1341

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tcttctcgcc	tgccgtcgcc	gcgcagtagc	tgccgcccc	gcctcgcgag	accctcgatt	120
tcccgtggga	ccgcaagccc	tcctcttctc	cccagcaggt	tcacatttct	ttagctggag	180
atggacatat	gcgcatttca	tggtgactcg	atggtaaatc	ttccccttca	tcagtggaaat	240
acggaaacatc	gcccggtcga	tatgactcta	cagctcaagg	agagagcact	tcttatagtt	300
atctatttta	tagctctgga	aagatacacc	acacggtgat	cgggccattg	gagagcaaca	360
ctg						363

<210> 1342

<211> 316

<212> DNA

<213> *Eucalyptus grandis*

<400> 1342

ccctggcctct	gccttagctc	tcctcctcgt	cctcgccctt	atcaagctat	tcagacccaa	60
aaccaaacac	ctgaacctcc	cgccgggggag	atttggtagg	ccaatcattg	gcgagagcct	120
ggagttcctc	cggtcccgac	ttgaaggagg	cccgagagag	ttcatcaagg	accggatgac	180
caagtacaac	tcacctgtgt	tcaagacctc	ggtgctcggt	gagccgaggt	tcactcctgtg	240
tgggcggcg	gggaacaact	tctgttctc	aaacgagggc	aagaaggtgg	tgctgtggtg	300
gcgcagctcg	gtccat					316

<210> 1343

<211> 322

<212> DNA

<213> *Eucalyptus grandis*

<400> 1343

aggtgttccg	atcttcatag	aagatgatga	tggtgagctg	ttgtggcctg	gcagcttccg	60
tcaggcgcca	caagcacacg	ctcctcaacc	gagttttgtt	ctaactggag	gttctaaccat	120
aagcttcgtc	gggggtgaatc	caccatctga	tcgaggcaat	tcagctcctc	acttgacact	180
gaaactttaa	aagagggttaa	tcttcagtta	agctcactgt	ttgcttaacc	caacattgca	240
cttctgcttt	cttttggtat	attcccaaat	gtcttttcca	gttcctttcc	tgtaagtgtc	300
cactccagta	tgaagtctat	aa				322

<210> 1344

<211> 323

<212> DNA

<213> *Eucalyptus grandis*

<400> 1344

ctggaccgcc	acctgaagac	cctgaccggc	cacgtcgccg	cgtctcctg	cgtaagttc	60
tcacaacgag	gcacctcct	ggcctccgcc	tcctcgaca	aaacctaat	catctggtcc	120
tcacacggcc	tcctcctcct	ccacgcctc	gtcggccact	ccgagggcgt	ctccgacctc	180
gcctgttctc	ccgactccca	ctacatctgc	tcgcctccg	acgacgggac	cctccgcatc	240
tggtcctccc	gctccccctt	cgaactgcctc	aagacctgc	gcggccacac	cgacttcgtc	300
ttctcggtca	acttcaaccc	gca				323

<210> 1345

<211> 235

<212> DNA
<213> *Eucalyptus grandis*

<400> 1345
cctccgcccc gttccaatc atgaaggact gggatcccg ccgcgcagc cgcgcctcc 60
tcctcctact acgaatacaa cctccccctc gccgagccct gggccaagc caagcgctcc 120
aagcgcccc acaaccgcc ctccgaggac gagtacctcg cctctgcct catcatgtc 180
gccgcggcg gcgcggcgcc gaccctcccc ccgcgcctc ccccgcggt ctctt 235

<210> 1346
<211> 350
<212> DNA
<213> *Eucalyptus grandis*

<400> 1346
gtttggagg agttcaagct atgggaagga tgctcaaac ccgcaggaca tgcattgattc 60
acggccgaca aaacgaccac gtaattgttg ggagccttat cgtgaccag gacaggctga 120
gccgatggag gaacattgaa tgggatcagc aagtgatcct atggtcggg caggcagatc 180
ggacggaggat cataatccaa ttatgtcggc caccgctccc gcaaatgtgt ctaccgctgg 240
gagaggtcgg gtatgagata aaacaatcg caaattgtcg tgtaagagat gtcgtaggct 300
aaaactcaag tgcgaccgcg ttttcccttg ccagtcattg gtaagagag 350

<210> 1347
<211> 197
<212> DNA
<213> *Eucalyptus grandis*

<400> 1347
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gacgcggcga tgctcccatc gctgcaacaa gggcccaac tccaggacct gcccgctccg 120
cgcggcgccg ggggacggg ggggcggcg ccgcgcctcc tctcctcct cccctccac 180
ctcctcctc ggcgcgcg

<210> 1348
<211> 315
<212> DNA
<213> *Eucalyptus grandis*

<400> 1348
cgctggcttc gcttctcgg actatcttcg cgatcgctt tggaggatcg ttcggggaaa 60
ttggaccgaa gtttcgattt ttacgaggcg agatcagctg aatcggtgt ccttttgag 120
gtgatcagaa taatggagtc tcacgatgag acaggatgcc agggcccaaa agggcccaatc 180
ctctgcatta acaactgtgg cttcttcgga agtgcgtcca ccgccaatat gtgctcaaa 240
tgccacaagg acgtgatatt gaaaacaaga caggcacaag cagctgcctc ctcgattgag 300
agcattgtca acaga 315

<210> 1349
<211> 329
<212> DNA
<213> *Eucalyptus grandis*

<400> 1349
gagagagatg gggctccgga ggatgagggt cagtcgctgt cccggtcggg cgaccggggc 60
gcttccacca gcgcggcgcg cggggcgagg tgcgcgcggc ggttcgcgcc ggcggctcag 120
ccggagataa tgaggcgccg cgagaaggac gaccagtagc cctccttcc ctacgacgcc 180
tgccgcgacg ccattccgcca cctcttcggc accagagtcg ccgtggcgta tcaaaagcgag 240
acgacgcttc tcgggcaaat gctgtactat gtgctgacga ctgggtcggg gcagcagacg 300
ttgggggaag agtaactgca catcactca 329

<210> 1350
<211> 313

<212> DNA

<213> *Bucalyptus grandis*

<400> 1350

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tgaggagatcg	ttcggggaaa	ttggaccgaa	gtttcgtatt	ttagcaggcg	agatcagctg	120
aatcggaata	atggagtcct	acgatgagac	aggatgccag	gccccaaaag	gcccaatcct	180
ctgcattaac	aactgtggct	tcttcggaag	tgctgccact	gccaatatgt	gctcaaaagt	240
ccacaaggac	atgatattga	aacaagaaca	ggcacaagca	gctgcctcct	cgattgagag	300
cattgtcaac	aga					313

<210> 1351

<211> 305

<212> DNA

<213> *Bucalyptus grandis*

<400> 1351

ccccgccac	ttatctgcta	tctcgtctac	ttcgtcttat	tagttacctcc	acaatcccat	60
gcgcaaacgc	caacgcaccc	tcgacatgca	cgccggcgca	ccaggtccca	acgatgccat	120
tgacgcgaac	agcgtcggcg	acaacgcgtt	catcgcggat	cacgacgcaa	ttgactcggc	180
cgcgacgac	gacnacnacn	aagacaagcc	caagaccggc	cagaagcaag	gccgcgcaa	240
aataaagatc	gagttttatc	aggacaatc	gagacgccat	atcaccttct	ccaaaaggaa	300
agctg						305

<210> 1352

<211> 517

<212> DNA

<213> *Bucalyptus grandis*

<400> 1352

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gccgtccccg	accagcagca	gcagtaccag	cagcagcagc	agcagcagtg	gatgatgatg	180
cagcagggcg	ccagcccgct	gcccccgccg	gtgggtcggg	ccccgcagcc	gggtcccgccg	240
cccatggcgg	ccagtcgat	ggccggcgccg	ggcgccggcg	agatcaagtc	gctctggatc	300
ggcgacctgc	agcctcacat	ggacgagacc	tatctcctca	actgcttngc	ccactccggg	360
gaggtttctct	cagctaagggt	gattagaaat	aagcagactg	ctctgcccca	gggttacggt	420
ttcattgta	ttatgaccgc	tgcagcagca	gagaggattt	tgcagacgta	caatggcaca	480
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<210> 1353

<211> 472

<212> DNA

<213> *Bucalyptus grandis*

<400> 1353

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atgggtgaaag	aaacttagac	agaaggtgag	gacattacat	catactcctg	aagagcatca	120
aaggcccaac	taacagaaaa	aggccgatac	ggcaacatcc	aaacaaatca	aaagccaaat	180
tgtgacccca	acgtaccat	ccatatacaa	tgcataaact	aaatcattea	ccttcggaca	240
tctactctct	ttctacttga	atggtagact	gacttatctt	gtactctctt	ctaattgagt	300
ccacaacctt	gtccagagacc	atatcggcat	tggcgctcag	ctttattttg	acatggcagg	360
ctaatagtac	ctttccaacc	gttatagccc	agatgtgcaa	ttcatggact	gcaatcactt	420
catcgatctt	gcaaaagtcca	ctctcgagcc	tagtggcacc	aatctctcta	gg	472

<210> 1354

<211> 472

<212> DNA

<213> *Bucalyptus grandis*

<400> 1354

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ctatcgccagg	gctctgcgata	cagacgcttg	gctgcacaaagc	atgaagagaa	gccctccgct	120
gtgctcgaca	aatcccaaga	tccacacagac	agcgcaaaagc	catccaagaa	gcccccccat	180
cgtcacagct	ccacccagct	cgtgcgcctc	aacgaactct	tfgagaaaag	cgaaacaccc	240
actcttgagg	agcgaggcca	gttggctgag	aaattaggaa	tggagaccaa	gacgttcaat	300
gcattggttc	agaaacagcg	tgcttctact	aagaagcgca	ataagggggg	aacctcgga	360
cctcacccag	ccacgagctc	gaacgacttg	tccgaagatg	ctctcaaaac	cccttcgcga	420
ctgcgcgtcga	tagcgaaact	gctcaacgac	gcaccctcat	cggcctcgcc	gc	472

<210> 1355

<211> 503

<212> DNA

<213> *Eucalyptus grandis*

<400> 1355

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tggcagaag	gcagggcgct	ggcgactcag	gacatattgt	cgcacatgct	gttggccacg	120
gacgaagctg	ggaagcacat	gaacgagatg	gacattgctg	acaagatctt	gggcttgttg	180
atcggggggc	acgacactgc	cagtgcgcgc	tgtaccttca	tctgcaagta	ccttgccgat	240
cttccccaa	tctacagagg	agctctaca	gagcaaatgg	agatcgccaa	gtcaaaagcc	300
ccaggagagt	tgttgaactg	ggatgacatc	cagaagatga	gatactcatg	gaatgtggcg	360
tgtgaggtgc	tgcgattggc	gcctccgctc	cagggagcat	tcagagaagc	cctcaatgac	420
tcatcttcca	atgggtttct	cattctctaa	ggctggaaga	tctattggag	taccactcgc	480
actcacagga	gccacagata	ctt				503

<210> 1356

<211> 360

<212> DNA

<213> *Eucalyptus grandis*

<400> 1356

atcttcttct	cccccaaaac	cccatcggac	ccaaaaacc	taacgaagat	gaatagggag	60
aggttatatg	agatggcggg	ttctgtccgc	actggtggaa	aggggtaccat	gagaagaaag	120
aagaaggtcg	ttcataaagac	caccacgaca	gatgataaaa	ggcttcaagc	caccctgaag	180
aggaattggg	tgaatgccat	ccccgcaatt	gaagaagtca	acatttttaa	ggatgatgta	240
gttatccagt	ttttgaatcc	caaaagttcaa	gcgtctattg	ctgcaaatca	ctgggttagtt	300
agtggtttct	ctcagaccaa	gaagctacag	gatatactcc	ctggcatcat	caaccaatta	360

<210> 1357

<211> 377

<212> DNA

<213> *Eucalyptus grandis*

<400> 1357

aaaaacaact	cctcagctc	ctcttcacca	ctgggttttg	agatgatctg	tgtgctcgcc	60
gcggttgatt	attatgtctt	attctgactt	gctgaacctg	ctgtttgccc	tggcggtttg	120
gtgcacgcgc	tatatcgagg	ctgcgcgtct	cgagtgcctc	cgggtctctc	atactctctg	180
tctgttttga	ttctgatagg	tggttttcgaa	ggctaagatg	ggctacgcac	agctggtcat	240
cggccctgcc	ggcagtgcca	agtcgactta	ttgtctcag	ttgtatcaac	attgtgaagc	300
tattggcgcg	acaatcacaca	ttgttaacct	agatctctga	gcaaaagact	ttgactatcc	360
tgtggccatg	gatataca					377

<210> 1358

<211> 360

<212> DNA

<213> *Eucalyptus grandis*

<400> 1358

ctctgcagat	ggatataact	ggagaaaata	tggacagaag	catgttaagg	gctgtgaatt	60
tccacgcagc	tattacaagt	gtacctatcc	taattgtgag	gtgaaaaagc	ttttcgaaag	120
tgtcctcgat	ggacatatata	cagagattat	ctacaaaagg	actcatgatc	accctaaacc	180

acaaccaagc	gcgcgcttta	ctggaggagc	gaccatgcc	atccaagaag	aaagatctga	240
taggttttca	tttatacctg	cagtgagag	cacatcgacc	gtatatggcg	agacatctta	300
taatgtctag	actgatggta	ctcctgaact	atctctctgt	gctgagaatg	acgaaactat	360

<210> 1359

<211> 347

<212> DNA

<213> *Eucalyptus grandis*

<400> 1359

gttccaccac	gctcgtcccg	ctcccgcat	tctgaaatcg	cgatcgccgt	cttcaacctc	60
gggaaaaaac	ctagcggatc	ccctccggtc	gccaatctat	ctcctgatcc	ccgcgctcgc	120
ccatgcgcgc	ctgatcccg	ccgcgcgcgc	tctcgccgtc	gatctccagc	tgatcgcgcc	180
tcgatttttg	ctcccgccc	cggcgcgatg	gtggtctgca	aatgccgcaa	ggctacgaag	240
ttatactgct	tcgtgcacaa	ggctccctgt	tgtggagaat	gcatactgct	tacggagcac	300
caaatatcg	tggttcgtac	ttactcagaa	tggtgtatat	atggcgca		347

<210> 1360

<211> 326

<212> DNA

<213> *Eucalyptus grandis*

<400> 1360

ctctcctccc	ccctccacct	cctcctctgg	cgcccgccgc	cgcccgccgc	cctcngcctc	60
cgcccgccgc	gtgaagctgt	tcgggggttag	gttaacggac	gggtcgatca	tgaagaanag	120
cgcccgccgc	gggtgcctgt	ccgcgcgcgc	ctaccactcc	tcgtcctccg	ccgcggcacc	180
ccgcaacccc	ggctcgtccc	cgatcgacgg	gagcgacggc	tacctgtccg	acgatccctc	240
gcccgcctcc	cgctcgtcca	atcgccgcgt	cgagaggaag	aaaggtatcg	aggattttga	300
ttgacgcgcg	gctccctgat	tcctctg				326

<210> 1361

<211> 526

<212> DNA

<213> *Eucalyptus grandis*

<400> 1361

atcccactcc	ccatccgctc	cgccctgaatc	ctctcctggg	aaaattaggg	tttctgcaag	60
ctccggattt	tcgtccctct	ttgggggtcc	tcgattttgat	gataagccat	ggatgcctgg	120
ggctcgtgcta	gtgtcgtcg	cgcgctcctg	tggctcgcct	tgtctggggg	tggcgcgcacg	180
gcgtcggcga	gcgtcgtcct	gatcggcagc	aacgtcacc	tctcctctcg	cgccgtcgag	240
gctgaattcg	ctcccgccga	taagggttct	gggggtttcg	cgctgctgta	tcttcgggac	300
ccgatcgatg	cgctcgtcta	attggtgaat	gaggccaaac	gggttcgcga	tgtatgctcc	360
cttttcgcgc	taattgttag	gggaggagga	tgtagtcttcg	aagagaaagt	taggagagct	420
caaaaggctg	gattcaaacg	ggctattgtc	tatgacaacg	aagctgatgg	caacttggtg	480
ccaatggctg	gacattcagc	tgggataaag	atccatgctg	tgtctcg		526

<210> 1362

<211> 307

<212> DNA

<213> *Eucalyptus grandis*

<400> 1362

gaccgcgata	cccgctgcc	atctggagga	cctattttgac	aaccataaca	tggctcgaat	60
acggggcgta	tgggccccga	atcttgagat	agagatcgag	aacatcccg	aggccatcga	120
gaaatactcg	tatgttttca	tggaacccga	gttctctggag	tggtggccgc	gcccataggt	180
aactcaaaaa	cgctcctcga	ctaccactac	cgacgatgc	gctgtaacgt	cgacctcttc	240
aagatcatcc	aagtccggat	cacgctggca	gacgaggagg	gggtgttccc	gcaggactgc	300
tctacgt						307

<210> 1363

<211> 353

<212> DNA
<213> *Eucalyptus grandis*

<400> 1363
cttgaagggtg acttcaacaa acacgatgag gataactgga tccaagaaga gtttgagaac 60
catgtggnta aacaacgtga aggaagagg cgccttttga ctggagatct cctagtgaag 120
ctcgaagag ggtgtgggaa gctgggaagt ttcatgttta ctgacaatc cagctggaat 180
aggagtaaaa gtttcaggat agggccttaag gtggcctcag gttattgttg gaacacacga 240
atccgagaag caaaaacata agccttcact gtgagggagc atagaggaga atcataataag 300
aaactctatc cactcgacc tgacgattaa atctggagg tggagaagat cgc 353

<210> 1364
<211> 324
<212> DNA
<213> *Eucalyptus grandis*

<400> 1364
cctcgcccg caaaaccgat tgcgaggtcga gactcgagta aagatgaatg tggagaagct 60
tatgaagatg cggggttcag tccgcactgg tggaaagggt accatgagaa gaaagaagaa 120
ggctgtgccc aagacaacta ccacggatga caaaaggctc caaagcactc tcaaaagaat 180
tgggggtta gctattcctg caattgagga agtcaacatt ttcaaggatg atgttgtcat 240
ccaatttgta aatcccaag ttcaagcctc tattgcagcc aatacatggg ttgtcagtg 300
tgctctcag accaagaat tgca 324

<210> 1365
<211> 306
<212> DNA
<213> *Eucalyptus grandis*

<400> 1365
gacaaattga tgaacatga atatggatgg gtgtttaaca ctccggttga tgtaaggggc 60
ctcgctttgc atgtactacta tagcatcata aagcatccaa tggacttggg cagtgtaag 120
acaaggctga accggaactg gtataagta ccaagaagat ttgcagagga tgctcagactt 180
acgttccgta atgccatga atataaccct gaaggggcaag atgttcattg catggctgag 240
attctgtaca agatatttga ggatagatgg gccattatag agtcagatta taatcgtgaa 300
atgcgg 306

<210> 1366
<211> 345
<212> DNA
<213> *Eucalyptus grandis*

<400> 1366
cggcgccgtg cagctttccc ctccgtgtcg acacgacgac gactccgccc cgcctccccc 60
ctcgcttctg ctctcctctc ctccgctgt atatatctct cgtcccccga caaaaaaagg 120
agaaatctga agagagggga tggaaattag gttattgaga aggattcttc cgtgaccaa 180
tcttttggag aaagatggct tctcaattta atttcaaagg cataaccgat gcattcgcaag 240
ctgaaggagt agctgggaaa tcacacggaa atcaactctt aactccggcag ccatcaatat 300
atgctttgac ttttgatgag ttccaaaaca catggggtgg gcttg 345

<210> 1367
<211> 292
<212> DNA
<213> *Eucalyptus grandis*

<400> 1367
cgaaggctc acatttatga aactcaagggt ctgaaggatg catttattat atgtctcaat 60
gccgtagagt ccatgtgatg aactaaaaag gggagccttg ctagggttcat aaatcattca 120
tgccagccaa attgtgagac aaggaaatgg aatgtattgg gggagataag agttggcata 180
tttgcacagc atgacattcc tgctggatct gaattgtcat atgattataa ctccagatgg 240
tatgttggag ccaaggctcg ttgtctctgt ggtgcacctg gctgctctgt 292

<210> 1368
 <211> 278
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1368
 ctgcaacgac ctgacggcgt tgcggcggtt cctgcgcgtg aaccaccacc aggcagagga 60
 ggacgaggag gacggggcgg cgcccgggga ggacggcggt ctgggctgag acgagttccg 120
 gatgtacgag ttcaagggtga ggaagtgcgc gcgcgggagg tgcgcagact ggacagagtg 180
 cccgtacgag caccgccgag agaaggcgag acgcaggagg ccgcgcggtt tcttctactc 240
 cggcactgca tgtctctgatt tccgcaaaagg cgcgtgca 278

<210> 1369
 <211> 328
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1369
 ttcaacttcgt cgctctgctc gtctctctcc ctgtctctct cgccaatctc catcggcgag 60
 aactctgata aagcatccct cggctatctg tcggatggcc tgcctgggtag atcccaagag 120
 aagaagaag gagttccatg gacagaggag gaacacagaa ccttcttggg ggggcttgag 180
 aagcttgagg aggggtgatt gagaggctc tctaggagct atgtgaccac aagaacaccg 240
 gccaggtgtg caagtcatgc tcagaaatat ttctccggc aagttagctt caacaagaaa 300
 aagcggcgct cgagcctctt tgacatgg 328

<210> 1370
 <211> 96
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1370
 tgaattcggc ggggagttaa tgaatccaag aaqcaactgg ctaattgtat ataattgatga 60
 tgaggngnac atgatgcttg ttggggatga cccgtg 96

<210> 1371
 <211> 320
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1371
 agagagagaa gaacccttct tcacaaacct ctctctctct ctctctctct ctcccccgtg 60
 gtctgtcgat tctcgctggg ctgcgcttcc tcggattggt tcgacgcgt acgctgaatc 120
 gcgcggggaa ttccgcccgt gtttcgattt tgcgagcga gatcagcaga atcaggagat 180
 caggacaatg gagtctcaca atgagacagg atgccagcct ccaaaaggcc caatcctctg 240
 catcaacaac tgtggcttct ttggaagtgc tgccactgcc aatatgtgct cgaagtgcga 300
 caaggatgtg atgctaagc 320

<210> 1372
 <211> 343
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1372
 cggccgctgt cagctttccc ctccgtgtcg acacgacgac gaactccgcg ccgctccccc 60
 ctccgctcgt ctctctctct ctccgcttcc atatatctct cgtccccga caaaaaaagg 120
 agaaatctga agagagggga ctgaaattag gttattgaga aggattcttc cgtgaccaa 180
 tcttttgagg aaagatggct tctcaattta atttcaaaagg cataaccgat gcacgcgaag 240
 ctgaaggagt agctgggaaa tcacacggaa atcactcttt aactcggcag ccatacaatat 300
 atgctttgac ttttgatgag tttcaaaaca catgggggtg gct 343

<210> 1373
 <211> 310
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1373
 ctcccccctcg cggagccctg ggccaagcgc aagcgctcca agcgccccc caaccgcgcc 60
 tccgaggagc agtacctcgc cctctgcctc atcatgctcg cccgcggcgg cgccggccgg 120
 accctcccc cgccgctccc ccccgcggtc tcttcgagg cggccaaggt ggctacagg 180
 tgcccgtctc ggcacaaggg cttcccctcc taccaggccc tgggcggcca caaggccagc 240
 caccgaagc acgctctc cgccgcggcg gcgcggggg gtgacgacca gccgaccacc 300
 tcgagcact 310

<210> 1374
 <211> 306
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1374
 agcaagcaaa agaagaaacc agaaaaatca gacacccga tttcacattc tctaactacag 60
 aattccggag atgggtgaaga gagacagaga ggacacggag gtccgaagccc tggccagggc 120
 caattgcttg atgctctctc cccgtgttgg cgagagcacc gactcggcgt cgccggaccg 180
 caaatcgcg cctacagagc gaattgtcgc ctgcaacact tgcaaccgag agttctnctc 240
 gtccaggcg ctcggaggcg acaaaagccag ccacaagaag cagaagctga tctccggtga 300
 cctctt 306

<210> 1375
 <211> 273
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1375
 cctcctctc ctgctgcggc tacgacctgc cctcgcga gccctgggccc aagcgcgaagc 60
 gcttcaagc ccccaacaac cgccctccg aggacgagta cctcgccctc tggctgatca 120
 tgctcgcggc cggcgccgcc ggccgaccc taccgccccc gctcctctctt 180
 cggaggcgt caatgtggcc tacaggtgcc cgcactgca caaggccttc cctctatcc 240
 aggccttggg cggcacaag gccagccacc gta 273

<210> 1376
 <211> 319
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1376
 gacaaatgag aaccctagga cgccttcagt cgacaaggag agcactactc caaggacgtc 60
 gaaatcagaa gaggagcaga gcgacacgag caactcgcaa gagaagggtc tcaagaaacc 120
 tgacaagata cttccttgcc ctcgatgtaa tagcatggac accaaattct gttactacaa 180
 caactataat gtgaaccagc ccgacactt ctgcaagaac tgccagagat actggacagc 240
 ttggtggaacc atgaggaatc ttctgtggg tgctggccgc cgcaagaaca agaactcggc 300
 atctcattac cgtcattata 319

<210> 1377
 <211> 339
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1377
 tctctctctt cgttctctcc gtttctctc ctctacctct cgccaagaaa cgccaggaa 60
 aggaaggaag gtaaaaaaga aagaaaagga agccatggct ccgagagaaa agcccagcgt 120
 cgccgcatc ccaaaacctc acggcgctaa ggaatccgt ttcggggcg tccggaagag 180
 gccctggggc cgtacggcg cgagatccg ggaaccggc aagaagacc ggggtgtggct 240

cggcaccttc gacacagccg aggaggccgc ccgcgcctac gacacccgcg ccgcgcagtt 300
 ccgcggcgcc aaggccaaga ccaacttccc caactccgc 339

<210> 1378
 <211> 343
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1378
 ctttgacgcg cattaaattc ccgcgactcc gaaatatctc acctccctct cccgcagaat 60
 cccatgattc cttccctagc tctctctctc tctctctctc tctatagaaa 120
 attctctatc ttgggtggcg gcgagaggcg gttgcgaggg atttccggtc gcgggtgtat 180
 gtgcgtgggg ttgggtgtgg ggtgggggag atgaagat tc agtgcacagc gtgcgaggcg 240
 gcgagggcga gcgtcctctg ctgcgccgac gaggcgccgc tctgctgggc ctgcgacgag 300
 aaggtgcacg ccgccacaaa gctcgccagc aagcaccagc gcg 343

<210> 1379
 <211> 368
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1379
 ctgcattctc gctggctctcg ccttccctcg actatctctg cgatcgcttt tggaggatcg 60
 ttccggggaaa ttggaccgaa gtctcgattt ttgacaggcg agatcagctg aatccgggaga 120
 tcgaataaat ggagttctac gatgagacag gatgccaggc cccaaaaggc ccaatcctct 180
 gcattacaac ctgtggcttc ttccgaagtg ctgccaccgc caatatgtgc tcaaatgtcc 240
 acaaggagct gatattgaaa caagaacagg cacaagcagc tgctcctcg attgagagca 300
 ttgtcaacag aagttccaac gaaaatggtt aaggacctgt ggcaactgaa aattggattt 360
 gcaagctg 368

<210> 1380
 <211> 362
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1380
 gaggtcagct acttcgtgta gccatggggc atgaaagtga agcatttgaa gagtttgttg 60
 atgcgcacaa aacttgcttg aatgatctca tttctctccc tactcgtaat gccttggaact 120
 ctcaagtgtt gctgcgaatg cagaaaagct tgctgccttg cagaacgaat atcattttgc 180
 taaagcaagg attgatgaag atcatgagaa ggccgacgca ctggagaaga aggtcaaaac 240
 tctcacatcc ggctatcaga tgcgggagaa gactcttcga gaccaaaattg agtcaacctt 300
 caagcagctg gaactgcag ggacagaact cgagtggttc ccagctctcg agaagcaaga 360
 gc 362

<210> 1381
 <211> 459
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1381
 tgctcgcaaa gtttgtttct ttgctcacia gcccaagaaa ttaaggcctg tctatgcttc 60
 gacgggatca gctatgcctt ccccaaaatc ctactcatca agtgggctgg acatgtccac 120
 attgagtcct ctctcaatca gttctccgtc agcatcgttg cctgttaact caacagcacc 180
 catgtctcct cttgcagcct cgtcatctcc gatgtctgtg aacatgtggc agagcaaggc 240
 taacaagctc tcccgcgcaa tgctgcagct ctccaggtagt aggtcgaaga ctgctttgag 300
 tgctagggaac ttggacctgg agatggaatt gcgtggtcta gagagtca gaagcaactca 360
 acagcatcag ttgatggaag agatatctcg tctctctcca ccatcatcct gctttagtag 420
 taggattggg gaagtgaac ccactaacct cgatgacgt 459

<210> 1382
 <211> 319

<212> DNA

<213> *Eucalyptus grandis*

<400> 1382

aaaaaaagaa	gcataaactc	aacgagcgaa	tctccctctg	tctctggttc	atctttggtt	60
cttcaggctc	agaacactcg	ctcagactgt	tgttctcaag	gttaaaatgt	catgtcaagg	120
ctgcgctgga	gctgtcagaa	gggtcctgga	aaaaacggaa	ggtgtggaaa	catttgacat	180
cgatctgaag	gaacagaaag	tgacagtcac	gggcaatctg	cagcccgatg	ctgtcctgca	240
aaccgtctca	aagtccggaa	aacaaactgc	ttctctggaa	gcggaagccc	cagcccaacc	300
cgaagtgaag	cccaccgaa					319

<210> 1383

<211> 408

<212> DNA

<213> *Eucalyptus grandis*

<400> 1383

cttctcttcc	tcttctgtgt	ccaaacgcga	gagaagagag	agagagagag	gtggaagaag	60
atcaatctcg	tatctgacgc	ggcaccggcg	gtgctcttca	tcttctccac	ctcatctctc	120
ctctctagag	aaccgaaagc	cggcgctctt	cgctcgctcc	gggtcggcat	gaacgggaag	180
gccaacgctc	ccaaggagct	caatgcgcac	cacagaaaga	ttctcgaagg	gcttctcaaa	240
ttgcttgaga	acagggagtg	tgctgattgt	aaggccaaag	gtccaagatg	ggctagtgtc	300
aatttaggga	tatttatatg	catgcaatgt	tcaggaatcc	atagaagtct	tggggtagac	360
atatcgaagg	tccgatcagc	tactttggac	acatggcttc	cagagcag		408

<210> 1384

<211> 315

<212> DNA

<213> *Eucalyptus grandis*

<400> 1384

gcaaaattgg	gcccttccaa	aattactggg	aggctcttct	ctaaatgcct	agaagatcc	60
gatggaagaa	atttgcagct	acaattcagg	accagggtgt	cgctcccgct	ctttactgga	120
ggcaaaatgg	aaggcgagca	agggtgctgc	atccatgtcg	tcttaagtca	tgacagatac	180
ggctgtgctg	tccatcacag	tcagagctcc	tctgtgaagc	ttgatgtgtg	tgctcttgaa	240
ggggatttca	acaatgaaga	tgatgacact	tgactcagg	aagaatttga	cagtcatgta	300
gtgaaagaac	gtgaa					315

<210> 1385

<211> 375

<212> DNA

<213> *Eucalyptus grandis*

<400> 1385

gttctcgaga	accagctccc	atcccagttc	gaaccatctg	agaacaagtc	aaccagatc	60
gtcaaaatcg	aattctgact	cgagggagaa	gcggagaatg	acgaagcgca	gcgcagccaa	120
ggcccgcgag	gtgcacggag	gcgagggagc	gaggagcgag	ctgaagtcca	gaggggtgcg	180
gaagaggaag	tgggggcaggt	gggtctccga	gatccgctcg	cccaacagcc	gggagaggat	240
ctggctcggc	tcttcagaca	cccccgagaa	ggcgcccgcc	gccttcgacg	ccggccgctt	300
ctgcctcggc	cgccccgcgc	cgaagctcaa	ctnccccggc	agcccccgcg	agatctccgg	360
cgcgcgctcc	ctctc					375

<210> 1386

<211> 332

<212> DNA

<213> *Eucalyptus grandis*

<400> 1386

cogaatatca	ccaccgcgaa	aatgatgac	ggcgagtcgc	gccaccaccc	cctccacccc	60
acgaaggttt	gcatacctcc	tccgctgtgg	ccgtccctcg	acgatcccg	cgaagagatc	120
tcccccgctc	tcgacgcgga	ccacctcgcc	gcgctcgccg	ccgcttctag	tcgctacgct	180

ctgcaggaca	tcattcgccg	gctgcgcgcg	caccagtcg	accgcgagtc	cgacggccccc	240
gactcgcgg	tggacctcta	cacgtccgat	cacttcgcga	tgtacgagtt	caaggctcgg	300
cggtgcgcg	gcggcaagtc	ccacgactgg	ac			332
 <210> 1387						
<211> 320						
<212> DNA						
<213> Eucalyptus grandis						
 <400> 1387						
ggaacctttt	tgggtttttt	ttggcgctcg	ggcaccgggt	cgaggagttg	gctgcaatgg	60
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ccttcacaa	ttgggtcaca	attggaagct	gtggataatc	tgaagagtt	gcaggtcctg	180
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tcggagcagc	gcgctatcca	ggtgttccat	tccagagttg	ataagacact	gatgacggat	360
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<213> Eucalyptus grandis						

<400> 1391
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 tctacagtat gccacgacg cgcacacagt ccaccc 156

<210> 1392
 <211> 555
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1392
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 ttgcgtcat ttaaagcatt gtgtgcnaag ctataatgtg ttgtatttcc tgaggagat 240
 gtgcacaggt gttcctgact atggtcatgg tcatggtcat tcagatgctg tctctgagga 300
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 attcaagaag agcaggatgc ttgagatggc ccatactggc agcagtgga gaggaagagg 420
 ccgtggccga ggaagaggcc gggcggtgg tggccgagcc actgagaggg agactcgca 480
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 caatcaagga acagt 555

<210> 1393
 <211> 525
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1393
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 ccatggtaga attaagaggt ccatgttga gaatgttgat aaagaggaag ttacgcgcaa 360
 ggagacggtg atatatgagg acgtgtcttt ggaagaggt gctttcttgg ttcaacaagc 420
 catcgcggtc tttcgtgctc aaaaatgtga aagtgcacaa tcaagactca gtgtctgtgc 480
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<210> 1394
 <211> 443
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1394
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 ccaggtcgga ggtcgtcgat gtctgtgacg atgacttcca ggcgcagctc cagggtctca 180
 aggcagatc cgacgtcgag gacgacttcg acgacgaggt cgaggtcgac gtcaagccct 240
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 agtataatgg gcaagctgag aaatctgcca agagaagag gaagaaccaa tataggggaa 360
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 gagtttggct tggagcgttt aac 443

<210> 1395
 <211> 409
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1395
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cggccaagt	cgtgttttg	aattttgtta	catcagttgg	tgcttcgtca	agcacactgg	240
aacagagatt	caccagctag	aattagcaat	aaacctacgg	gtcacagggc	tcacaaactca	300
tgggtataag	acttctattc	tactgccgt	gccgcgcgca	ctgcacatca	gcgtcatgaa	360
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<210> 1396

<211> 462

<212> DNA

<213> *Eucalyptus grandis*

<400> 1396

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ctacgcgaac	cttctcgccg	aaggnnnatn	agagagagag	agagagagag	agacgggaag	180
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cgcccgcgaa	gagggagcgg	gccgagatag	cgccgcgcgg	ggtgccccat	gcggtgcggg	300
cgcccgccgg	ggaacccaga	tacagggggc	tccggcggaa	gtcgcgtggg	cgatcacagg	360
ccgagatcag	agaccccggg	acgaagaagc	tccgtcgccg	cggcactttc	ggctcgccgg	420
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<210> 1397

<211> 407

<212> DNA

<213> *Eucalyptus grandis*

<400> 1397

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ccccctttgt	ataaccagcg	aaaccatccc	cacgacggcg	cctctggggt	caaccctgtc	180
ctcacccagg	agcaactggg	cgacctccct	ctcagctcca	acgactccga	tgacatgtct	240
atttacaact	ccctccacga	cgccctccac	tccggctggg	cccttttcga	ctcgcgtatc	300
acccgcgtcc	accccgagcc	ccagccccac	ccctctctcc	cgcccgctcc	cgtecccaac	360
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<210> 1398

<211> 456

<212> DNA

<213> *Eucalyptus grandis*

<400> 1398

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catttcaatg	gaagtatgct	caatgatact	aactcatctg	gtgaaagtag	cacacgtaat	180
ggaagccac	gagagagatc	cagggggaag	aatacaattac	ttctctgtta	ctggcccgagg	240
ataacagatc	aagagctaca	acaaatctca	ggagactcga	actctgtaat	caactctctg	300
tttgagaaaa	tgttgagtgc	tagtgatgca	ggtaaaattg	gacgtttagt	gctgccaaag	360
aaatgtgccg	agggcctatt	tccgtctatt	tctcagcttg	aaggattgcc	actcaaaagt	420
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<210> 1399

<211> 474

<212> DNA

<213> *Eucalyptus grandis*

<400> 1399

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tgttggggct	tgattggaaag	gatttgatgg	agctgttcat	tcacaaaggca	ttgtcttctt	120
gagatgcgga	cttcaaacca	gcagcgtctc	tgttgatttt	ggtagggggc	ctcgcagttg	180
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ccatgggctt	ccagagggca	acccgagcgt	tgatgaacca	gttagacacc	tggctcctgg	300
ttagtcccg	ttgttttgcg	agcatgtgtt	tgtccgaatc	tttgggatag	ctgcaattgc	360
aacacgccag	aatgtttgaat	gtacaattgc	aactcaaaac	taaagcgtgg	tcgtcaacca	420
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<210> 1400

<211> 443

<212> DNA

<213> *Eucalyptus grandis*

<400> 1400

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ccggccagct	cgactctcgc	atgatcgccc	accggaagat	cgaccgggct	tccggcgaga	300
tgctcgcctc	cagctacgac	gtcgtccgga	agccgtacct	caagtacttc	cgattctcca	360
aggacggcga	gaagtccccc	gacgtcgaga	tccccctggc	tgagccgacc	atgatgcacg	420
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<210> 1401

<211> 481

<212> DNA

<213> *Eucalyptus grandis*

<400> 1401

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agcggaacatg	tatccctgcc	gctcgccacg	tccgcatgct	gctccttctt	caccacttta	180
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ccgcctctga	cggggaagtt	caggatggcc	ttgctcccg	ggagcctgaa	cgcgccggcg	360
tcgtaggcct	tcgctgcctc	caccgcgctg	tccaacgtcc	ccagccacac	gcgcgtcccc	420
tgcgcgctcg	ggtcgcgtat	ctccgcgcgc	aacttcccc	acggccgcgc	gcgcaagccc	480
c						481

<210> 1402

<211> 384

<212> DNA

<213> *Eucalyptus grandis*

<400> 1402

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ccgatctacc	agagctccga	tctgattagc	ggaattaggg	ggctgttcaa	tttccatgaa	300
tcggagatgg	gatcgcggtg	taggggtttg	aatagcgagc	atgaccggcg	gtcgtcttgg	360
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<210> 1403

<211> 380

<212> DNA

<213> *Eucalyptus grandis*

<400> 1403

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cgaccatggt	ctaccaaaat	gaagagctcg	acagttgggt	ggacgagggc	atatacgggt	180
actacgactc	gagctccctc	gacggggcgg	cgtcgaccgc	tgcttccaag	aacatcgtgt	240
cggagagga	ccgaaggga	aagctcaacg	agaggtatt	cgcaattgag	gcgggtgggtc	300

ccaacattag	caagatggat	aaggcatcca	tcatacaagga	tgcgattgac	tacatccaag	360
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<210> 1404
 <211> 432
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1404						
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gcgcctctct	gcctcggcgg	cccgcgcggc	aagctcaact	tcccgcggcg	ccccccggag	360
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aactcggggc	cc					432

<210> 1405
 <211> 345
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1405						
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ataacagatc	aagagctaca	acaaatctca	ggagactcga	actctgtaat	cactcctctg	300
tttgagaaaa	tgttgagtgct	tagtgatgca	ggttaaaattg	gacgt		345

<210> 1406
 <211> 471
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1406						
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tcggatgggt	ataacgacct	acgaggggac	acataaacct	tcccgtgtgc	atgactcgaa	420
ttcatcgcaa	catgaagggt	tcaactcggt	ctagtattgc	cccaagacag	a	471

<210> 1407
 <211> 471
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1407						
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<210> 1408
 <211> 303
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1408
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 cccacgttga aatacataaa tcagatgctc atggaggagg acatagatga caaacctgt 240
 atgtttcatg atccttttagc tctcaagctg cagagaaatc cttatcacat gctctctgtc 300
 cga 303

<210> 1409
 <211> 367
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1409
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 cagcgcgtgc atacagtcca tgcagtgcga agcaggagac atagtacat ttagtccgtt 300
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 tcaggaa 367

<210> 1410
 <211> 353
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1410
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<210> 1411
 <211> 586
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1411
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 tggccccagc ttacttccct gcgcgtagcaa cgcatttcaa tggaaagtat ctcaatgata 180
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 ttctcagctc tgaaggattg ccaactcanag ttcaggatgc caaaggctcg gagtggatga 480
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<210> 1412
 <211> 427
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1412
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 cgggtcccaac gaccacatt cgagatctc caagggcaag cgacgaagc gccagcggcc 180
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 cggtaaa 427

<210> 1413
 <211> 375
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1413
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 gcagatctga tagagaacct gcattgttag cagcaattct gagctcgtag gttctctcga 180
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<210> 1414
 <211> 369
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1414
 ctcaaaatgg acttggtcgtg ataacagttg ggatccagaa agatcatctt gctcggcgga 60
 tcaagacttg acggcagaag agcttgaaga tatgtatct aataataatc cagcaccttc 120
 taagaagact aaggctccta aacaagagaa tatggaaagca ctggaggggc tggatactct 180
 tgccaacctc gaactcttag gagaaggcga ggtgtcctca tcatctcttt catcatctca 240
 agccacaata aagcacctc gacacgacc aggggtgttca tgtattgttt gtatacaacc 300
 cccagtgga aaggggccaa aacacaagcc aacatgcaca tgtaatgtct gctcagacct 360
 aaagcgct 369

<210> 1415
 <211> 313
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1415
 gccgattacg acgagggcgg cgacgacaat cggggagacc gccaccgggt gaccggcgag 60
 ttcttcccg tggaggagga ggaggagatg gaagaggatg gcgagcgggc aggaatggg 120
 ggagccgagc tgccgcgggg gtcccgagg gcgcactggg tcggagtcag gttccggcag 180
 tcggatcacc atccaatcgg atcgggcaag ggctcaccga tattggaggg ttcacagccc 240
 atgaagaaga tcaggaaagg gccgaggtcg cggagctccc agtatagagg ggtcactttt 300
 tacaggcgaa ctg 313

<210> 1416
 <211> 489
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1416
 ctcttcgaaa accctttctc ttctctcgat ctctctctct ttctctctcc ttgtgattg 60
 cagatcaggc tcccacggcg ttccattcgc gcattctcga cctctctctt ccacggggcg 120
 actgtcccg cgcgcgaatt caccgcgcg tcgtaggaga ccgcatctca cggcccgcg 180

gogatggcgg	cgccacgagg	agatgccagg	ggaaggaatc	aattacttcc	tcgttactgg	240
cccaggtataa	cagatcaaga	gctacacaaa	atctctggag	actcaaaatc	tgtaatacct	300
ctctctgtttg	agaaaaatgt	gagtgcctagt	gatgcaggta	aaattggacg	tttagtgtcg	360
ccaagaaaaat	gtgcgcgagg	ctattttccg	cctatttccc	agcctgaagg	attgccgctc	420
aaagttcagg	atgccaaaagg	ctcgagtggt	atatttcaat	ttcgattctg	gcccaataat	480
aacagtga						489

<210> 1417

<211> 372

<212> DNA

<213> *Eucalyptus grandis*

<400> 1417

catcggcgag	ctccacggcc	actccggcat	cgccgggctc	atgctcttct	acgcccgcag	60
ctctcttggc	ctcgtcgacc	accggaatgg	catggggctc	gcgaacgcg	gcctctgtga	120
cttcgacggc	caactcctcg	cgatgtccga	ggacgacctc	ccctaccacg	tggcgctcac	180
gcgctccggc	gacctcgaga	ccgtcggcgg	ctacgacttc	ggcggccacg	tcgactctcc	240
gatgatcgcc	caccgaaga	tcgacccggc	ttccggcgag	atgttcgccc	tcagctacga	300
cgctgctcgg	aagccgtacc	tcaagtactt	ccgattctcc	aaggacggcg	agaagtcgcc	360
cgacgtcgag	at					372

<210> 1418

<211> 354

<212> DNA

<213> *Eucalyptus grandis*

<400> 1418

gcggaatttg	aatatcagag	gagcacaaa	cagccagcag	tttgcgtgga	ggagaatgag	60
ttagctgaca	ttttcgtatg	ggttctactt	tgtgctccga	cgggaaataa	gcctgattct	120
aaatctctctg	gtttctagatt	tgaggatgcc	tcaataatg	gggcaagcca	gaatgtacag	180
aaaaatcgca	atcacctgca	ctttcagccg	aacagctctg	tgtaaaaaaa	ccaatgagtg	240
ataaagaagg	agtcgtggat	ctgaggaacc	ttctgtgttc	ttgtgcacaa	gcagttgccc	300
tggaggatcg	taaaaaatgct	aatcaatc	tgaagcagat	taggcagcac	tcct	354

<210> 1419

<211> 540

<212> DNA

<213> *Eucalyptus grandis*

<400> 1419

ctcaatcgga	gttgggctgg	ctgtgatatc	tgtgtccggc	gccagggccg	ccatgtcttt	60
tggcagcccg	atggcgctgt	aaatcgctga	accgtaagaa	cggcagtaaa	caagtgtcgc	120
atgagtaacg	cttttttggc	ctgtgtgtcg	ccatgtgttt	cttcaaatg	cccttcaatg	180
caaatcgctt	cccgcatgtg	tcacattcga	acggggcgac	cttcgaactc	gaatggagatg	240
cgacatgacg	cggttagtct	tcctcgaaat	gaaaagactt	tcgcgaagt	ttacacggga	300
actcgcgcag	cacatcgtac	tgtgtaggaa	catattcgct	tcttgaatca	tgttccatcg	360
ctgtagaatc	attttcttct	tccttcgtag	actcgttcga	attgttgttt	tcggttgagg	420
tcgtcgcaga	ttcaggagat	ccagcaggat	tggagataac	tggctcatcc	acaggaacaa	480
acgcgatctt	ggcgagattt	tccatcagga	tgggctccac	agtgaccgga	gggcccctcg	540

<210> 1420

<211> 349

<212> DNA

<213> *Eucalyptus grandis*

<400> 1420

gatgggttca	aacagttcta	tgggcttgg	gggaagagat	catcatcgat	tcggcctccc	60
gaacaagaga	gaaagaaagg	ggttccttgg	accgaggaag	agcacaagct	ctttttgatg	120
ggtctaaaaa	aatatgggaa	aggtgattcg	agaaacatct	ccaggaaact	cgtagtcacg	180
agaaacacga	cgcaagtacg	tagccacgca	cagaataact	tcatcagaca	actttcagtg	240
ggaaaagata	agagaaggcc	cagcatccac	gatatcaca	ctgtgaatct	cacagagact	300

agaactcctt caccagatga taaaaggccg ccttcgccag atccttcac 349

<210> 1421
<211> 378
<212> DNA
<213> *Eucalyptus grandis*

<400> 1421
ccgaggccga cttcctggcc aaacactcca agcccgagat cgtcgacatg ctgcgcaagc 60
acacgtaccg cyacagagcta gagcagagca agcggagcta cagggggtcc gccgcgggaac 120
gggcccggag gggccgggttc gggccggggc ggacagagtg gtccggccgc gccccggagc 180
agctgttcga gaaaggccgtg acgcccagcg acgtggggaa gctgaaccgg ctgggtatcc 240
cgaagcanca cgcggagaag cacttcgccg tgcggggcgg gccggcgcg acgatgaagg 300
cggtactgct caacttcgag gacgtcggcg ggaaggtgtg gcggttcggg tattcgtact 360
ggaacagcag ccagagct 378

<210> 1422
<211> 358
<212> DNA
<213> *Eucalyptus grandis*

<400> 1422
ctcctctcct cctcactctt cctctttatc tctcctctcc tctcctccgg gtacatgcaa 60
gaattcgagg gggagagagg gagagagcgt gctttgaaca tggggaggag cccgaggtgc 120
gacaaggacg ggctcaacaa aggagcgtgg acggccgcgg aggaccagat cctgatggac 180
tacgtcaagc tcacagcgca gggcaaatgg agccggctct ccagggaac cgggtctaaga 240
agatgcggca agagctgcag gctgcgttgg atgaattacc tgaggcccgca catcaagaga 300
gggaacatct cggccgacga agaagaacta atcatccgcg tcacaagct attgggca 358

<210> 1423
<211> 373
<212> DNA
<213> *Eucalyptus grandis*

<400> 1423
catcctatga agccggaatc tgttgaagta ctgaatttcg gagatagtgg gagcggaagg 60
ttgctttcga gtcattcaca ggtcgcagtt gcagaggagc ctctgaacca cgtcgaggcg 120
gagaggcaga ggaggaggaa gcttaatcag aggtttttacg cctcagggc cgtggttcca 180
aatgatcaaa agatggataa ggcttcactg ctccaagatg cggagtctta tatcaggagg 240
cttaacatga acctacaagc tgcagagctc gataaggagg atttgaagaa gcagttggat 300
gaactaaaga agcgatcacc ggataaagaa tgtatcccg tggatcaaga tcgcaagatg 360
gcaaaacctc cgg 373

<210> 1424
<211> 425
<212> DNA
<213> *Eucalyptus grandis*

<400> 1424
gcgaaccgag cgcgaatcgg ctaatgttca tcggaagctt ctcataagag gagggggtccg 60
aggcttcaat ttctgagcag ggctcatgga tcgtcgggtc tacaccaacc ccttcgtgca 120
tgatcaagaa gaagaccgcc agcccagcga agggccctgat tcgcccctct cgggggaaga 180
ctccaangtg aatgctatcg agccgtcnca aaagagaagg aaagagcgtga agaancgagt 240
gggtctcggt ccgatcgagg gcgacccgga gggatccaag agcaaaaggg agccctaccc 300
gcgctccgat tcgtggggcg ggaggaaagta cggcctcaag cccatcaagg gctcgcctta 360
cccgagggga tactaccgat gcagtagctc caagggtctc cccgcagaa agcaagtggga 420
gcgca 425

<210> 1425
<211> 434
<212> DNA

<213> *Eucalyptus grandis*

<400> 1425

gcacttttcag	cttcggcgtc	ctgaaggccg	gcgagggagg	tgatggtgtc	gcggcagcag	60
aactcggggt	gacgagggag	ctgttcccg	tgagggagg	ggatgcggat	atggagtggt	120
cgccgagctc	gtcctcgctt	gataagagga	gcgatgtctt	cttggttggt	gcttgaagg	180
aaaagggaag	tccgaggtcg	gcgatgccgc	agcagcggag	gaagagcagg	aggggaccga	240
gggtcaaggag	ctcgcatgat	agaggggtta	ctttttatag	gaggactgga	agatgggagt	300
cgccacatag	ggactgtgga	aaacaagtgt	atttgggtgg	attcgacact	gcacatgctg	360
cagctagacc	tatgatcgag	ctcaataaaa	ttcaggggct	tgatgcaaca	taaatttcaa	420
tttgagtgat	tatg					434

<210> 1426

<211> 414

<212> DNA

<213> *Eucalyptus grandis*

<400> 1426

gccagtatga	actctctctt	agccagctt	gttaacccaa	gaaggatgca	caacctacgag	60
ccatttgacc	agttccccc	gtggggagac	accttcaaa	ctgacaaggt	taaaaatctt	120
gaggcatcgt	catctgtgat	tgtgcatgca	gtatgatgat	gattggacaa	gaagtttgaa	180
tatgtttctc	atgaatggcg	agaaaaatcc	agctccagg	gcgatcaaga	agcaaataga	240
cctgacaagg	tacagagacg	ctagcacag	aacgtgaag	ctgctcgaaa	aagccgtctg	300
cggagaagaa	aatatgtaca	acaactagaa	tcaagccgct	tgaagctagc	acagtgggag	360
ctggaactcg	ggagagctag	gcagcaagg	ttgctcttgg	gaatgggatt	cgac	414

<210> 1427

<211> 332

<212> DNA

<213> *Eucalyptus grandis*

<400> 1427

aaaagcccta	gctaaatcaa	ttaacaagcg	ctaactctaa	aagcacagcg	gaagatttca	60
ctgttctgga	gagagcttga	tcttcagggg	cgtcgagaa	cgcggtctct	tcgaggggtg	120
ggggctctcc	acctcgtcgt	cgcccgacac	gatgaacccg	gtcgggaact	ccggcagcgc	180
gggcaagttc	aggtcgaaat	tgcggcgccg	gctgtcgat	ccgagcgcgg	cgggggccgc	240
ggacccacag	ccctcggaag	tggtagcccc	gctgttggcg	gagccgctgg	cgccgcatct	300
gtagtggcaa	cgcttgtgcc	cgcccgaggc	ct			332

<210> 1428

<211> 318

<212> DNA

<213> *Eucalyptus grandis*

<400> 1428

gatccaccaca	actggccaca	gcagcaagca	aatcaacaat	caggagcaag	cagtgagatt	60
cctcagcttc	cgctgcgcgc	gccccctctg	ccagccggag	ggggcggtac	aggctccatc	120
cgccgaggtc	ccatggccga	tccggctcgg	ctggccaaag	ttccgcagcc	cgagcctgga	180
cttaagtgcc	cccgatgcga	ctcgacaaac	accaagtctt	gctacttcaa	cgctacacgc	240
ctcacgcac	cgcgccactt	ctgcaagagt	tgcgcgcggt	actggaccgc	aggaggtgag	300
tgaggaaact	gccagtcg					318

<210> 1429

<211> 349

<212> DNA

<213> *Eucalyptus grandis*

<400> 1429

gaaagcctaa	agaaagcaga	tacaacagga	aaaggaggac	accaatacac	atggttttac	60
agaaagattc	acaagaacta	aaccgtcgct	gatcttaggc	acgagtcagg	ctgcttgagt	120
ggcgccatcc	ttgcagttgt	cgagatccga	ttcattgact	gaagaaggcg	ccttgataaa	180

tgctgactgt	cgagatgttt	ccccgagaaa	cttcaaagag	agtggtgcag	gttcattctc	240
agcaagactt	agctgagaca	ttccaactat	ttgggtcgata	tttaggggtt	cttttgggaat	300
tactgggatt	ggcttttagca	cacgggtgatg	agatgtcttc	accacccctt		349

<210> 1430

<211> 350

<212> DNA

<213> *Eucalyptus grandis*

<400> 1430

aacgcccgtt	ctccacaaca	agcgactctc	tctctttctc	tctctcctcc	aactaaaatc	60
ccaagcctcc	caagttctctc	cgaccatggc	tccccgggag	aggcccaacg	cogtcaccgt	120
cgccgtcagc	cccaggcccc	aggcgggcgc	caaggagatc	cgcttcgcgc	cgctcaggaa	180
ggcgccgtgg	ggccgctacg	cgcccgagat	cgcgaccca	ggcaagaaga	cccgctctg	240
gtccggcacc	ttcgacacgc	ccgaggaggc	cgccgcgcgc	tacgacacgc	cgggcgctga	300
gtcccgggc	gccaaaggcca	agaccaactt	ccccacgcgc	gacgagctcg		350

<210> 1431

<211> 350

<212> DNA

<213> *Eucalyptus grandis*

<400> 1431

aaccgacgac	acaggtgaca	agaatcacag	gttcgaagg	ggtaaatgg	gtgtgcagc	60
agcttctgat	tccagtgaca	gatcaaaaga	aaaagccaca	gatcagaaga	ctttacgcag	120
gcttctctca	aaccgtgaag	ctgcagaaaa	gagtagatta	aggaaaaagg	catatgtcca	180
acaaactggag	agtagcaggc	tgaactcac	ccaactagag	caagaactgc	agcgagcccg	240
tcagcagggc	attttcattt	caggtagtgg	agaacaatcc	cactcaatga	gcggaaatgg	300
tgccctggcc	tttgatgttg	aatatgcacg	ttggcttgaa	gagcacaaca		350

<210> 1432

<211> 317

<212> DNA

<213> *Eucalyptus grandis*

<400> 1432

cggggatata	ggtgctggca	ggtttaacta	cttaaatgat	aggtattatt	atcatcacia	60
aggtcggttt	ctggctgtta	atggacatat	gaatgggtact	tattatggca	ctggaagagg	120
gtcttccggt	ggaacatata	gtactggttg	tagtanaggc	tgtggtggca	ggtcagacta	180
taagatcacg	agaaaaagata	gggaatctat	gcccaacatg	agcgagcctc	ttgttgccct	240
tttgatgtt	cctaggaatg	ataagcttgt	gaaaattgat	ggcaacttga	taatttcattc	300
tattatggcg	agtgaga					317

<210> 1433

<211> 370

<212> DNA

<213> *Eucalyptus grandis*

<400> 1433

gctcaatgta	gtcatcaaga	aataaacatc	ctttagcaac	gaaagccaga	aagcctgaat	60
ctetaacgga	aacttcatcg	caogtgcata	ttaggccata	aaaacatgac	agataaaaata	120
caaaatccct	ttttctaatg	tgtaacattt	ttcggcagat	ttctaattgac	attactcttc	180
atcccaattt	tggtggcgcat	cgctccactt	cctgatcgat	tcattctctct	tatcaccttc	240
agcctgacca	tttgttctct	tgaccgtaca	gtggtagtta	atcccatact	ctgtacactt	300
gaggccagtg	cagcagtaat	tgccgcatta	tttccagttg	atggacgagg	tttctggcgg	360
tagtatctca						370

<210> 1434

<211> 210

<212> DNA

<213> *Eucalyptus grandis*

<400> 1434
 gaaaagcgta cgcgagggag cagcatcgct ggctcaccgg agctaagttag gtgtgatagca 60
 agactttttc gagagctatt cttgcaaaga gtgctcgat tcaagaccgtg gtttgcatcc 120
 ctctcttaga cgcgctagtg cgatttggca ccaaggaaag gggttcaagag gacatttcaac 180
 tcgtcaatca tgtcaaaacc ttcttcgttg 210

<210> 1435
 <211> 557
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1435
 ggctcgttcga caacacccctg tcgctgctga gccgcgccga gcccgacgag gtgtcgcagg 60
 tgcgcgtcag gccctgcgcc gtcaagtcgc aggaactcga ggagagcagc aagacctcgg 120
 tccccagaga ccgcgcgtga tgcatacaaga gaagaaagac ttccgataca cagataagga 180
 tggatcatata ttgtattgac gacggggcacc agtggaggaa atatggccag aagcgatttc 240
 ttaactcga gtcccccaag aactacttca ggtgtactca caagatcgac caaggttgctc 300
 tagcgacca aacaggtccaa aaggtacagg acgctccgcc cctctatagg accatatacc 360
 agggccaaca caccctgcaag aacctatcc tgaaatcccc ctccctcctc ctggactcgc 420
 ccgagccctg gggactcctc actcctcgct agcttcaaca ccagcctccc tcccgaagcaa 480
 gacgacaaca caaacacgac cagcaaccgc ttctctctct cgactttccc gtcggtgaag 540
 cacgagcccg aagctgc 557

<210> 1436
 <211> 438
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1436
 aatcaacacc nctcccacat ttctctctnt aagatccacc cccaaccgcc accctcaatc 60
 ttctcttttc ttctcttctc tcaagtgtctg ccccgctcgc gacaagggtg tccccctcta 120
 ccaggccctg ggcggccaca aggccagcca ccgcaagcac gcctcctcgc ccgcggccgc 180
 cgccgggggt gacgaccact cgaccaactc gagcaactcc gcggcgagca cctcctcggg 240
 cgtctccggg aaggtccacg agtgctcgat ctgccacaag agcttcccga ccggccaggg 300
 gctcggcggg cacaagcggg gccactacga ggcgcccgcc cccatccccg cctcctcttc 360
 cgccccctcc gcccgccggc ccccgccgcg cagcgggggt agcgtgtcgg agggcggtgg 420
 gtccacgcac acgcagag 438

<210> 1437
 <211> 327
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1437
 ttctctcttc ttctgtttct ccgtttctct ctctctacct ctgcgaaga aaccgccagg 60
 aaaggaagga aggtaaaaag gaagccatgg ctccgagaga aaagcccagc 120
 gtgcgcgcga tccccaaacc taacggcgct aaggaaatcc gtttcggggg cgtccggaag 180
 aggcctcggg gccgctacgc cgccgagatc cgggaccccg gcaagaagac ccgggtgtgg 240
 ctccggacat tcgacacagc cgaggaggcc gccgcgccta cgacaccgcc gcccgagat 300
 tccggggcgc caaggccaag accaact 327

<210> 1438
 <211> 360
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1438
 gcgagagcta accgccaaaa ttaccagct ctcatcttcc ccaactcaac aaaaataaccg 60
 gaccgaagga atgtgtatata atagtctat ttgatagcat aagaacgggt acataccgtg 120
 tcaaggacct ccatgaacaa ggatgaaaaa ctggctaatg cctggaanaa tcttggcaga 180

cccggtttgaa	gattgtttcaa	ggtactttgtc	ctcgtcactt	ccactgcctt	ggaatgtttc	240
agcattttctt	ctctaccct	cctttggcag	gttgcaagtt	caagttttctt	ctcgcccaagt	300
gggtccccgag	catccagcac	ctggccattg	tcgggcccag	gatcagggaa	ccctacacca	360

<210> 1439

<211> 269

<212> DNA

<213> *Eucalyptus grandis*

<400> 1439

ccgaaaacgga	atcggttcttg	gggtttgaa	cgaagccggt	aattatcggt	gaaacggcct	60
cgaaaacctc	gcaatcaagc	aagaagccat	cgctgaagat	cgcggtgccg	agaaaagtcg	120
agctgtctga	attctccaag	gcgaatccga	tggttcaagg	agggtcgaat	caagcacgcg	180
acgagcagag	gcactataga	ggagtccggc	ggagcccttg	ggggaagttc	gcggcggaata	240
tcgagaccc	caaccggaag	ggctcgccg				269

<210> 1440

<211> 351

<212> DNA

<213> *Eucalyptus grandis*

<400> 1440

aagaagacga	agcagctcat	ccgaccatgg	tgttggtatt	gcgaacgaga	atttgaagat	60
gaaaaagttc	tcattgcaca	ccaaaaggca	aaacatttca	aatgtggaat	gtgtcctcgt	120
cgtttgaaat	ctgtcggggg	tttggtcgtt	catattcagc	aagtgcacaa	actcgaaacct	180
gaaaaacctc	cacgtataga	aaatgcacta	ccagggaagag	atggctacga	agttgaaatc	240
tttggtatgg	tgggaatccc	agcacctgat	gtcgccgact	acaaacgacg	caaggaaatc	300
gaactgggac	tggcagcagg	atccatttca	cagcctcctg	ccaagcgctca	g	351

<210> 1441

<211> 476

<212> DNA

<213> *Eucalyptus grandis*

<400> 1441

gatagtcaca	gtctctctgc	tctctctctn	tctgtattct	ctatcttcat	ctcgccgctc	60
ttgatcgctc	tcattctcgt	ctcgcgaagt	ttgtctctcg	tcttctctct	tgctcgccat	120
tcaaaagatca	cttattcttt	ccgtttgggt	tgccgtgact	aagaactctt	tctctctctc	180
gctctgagtc	actcttgcct	tctcccgact	ttctctgggt	tgatgaaaa	ggcggaagaa	240
tcgaacttgt	cggacccgga	aacaagcccc	ttgaactcac	cctccacctc	ctcgctctct	300
tctctgactc	caccgcaccc	gcgcgcgcgg	gcgcgctcgc	ccgcgcgcgt	ccgcgacccg	360
ttgagatcct	ccaagcggag	caagcacccc	gtgtaccggg	gggtccggat	gaggaacttg	420
ggcaagtggg	tgctcgagat	ccgggagccc	cgcaagaagt	ccgcactctg	gctcgg	476

<210> 1442

<211> 315

<212> DNA

<213> *Eucalyptus grandis*

<400> 1442

gcaagacttt	tgaacctggg	aatcatgtna	aggctgtttc	tggntcccaa	gaaggtgcta	60
ctggtatggg	tgtaaaagtg	gagcaacatg	cgtgatcat	tttgtcagat	acaacgaagg	120
aactattacc	gtttttgcag	atgatgttgt	tgagagttca	gaggtaacat	ntggaaataac	180
cagaattgga	gaactatgag	ttcacgaact	tgtgctgctg	gataatacca	actcgggtgt	240
cataattcgt	gttgaaagtg	aagcttttca	ggtagggtgac	atgcactgag	gcaagtctct	300
tggacatgcc	cttca					315

<210> 1443

<211> 338

<212> DNA

<213> *Eucalyptus grandis*

<400> 1443
 ctcagccgag cttcagaggg aaacgcgcat gccctcgca aagtcactct gccacactta 60
 tcgggaacga taagatgggt atttttgggg gtagtgccca aggcgaagcg aactattgaa 120
 cgacctgcat attctggacc tagagacgat gagtggaatg tctcctgagg taaaaggcga 180
 gattcctgtc cctagggaca gtcacacgcg tgttgccatg gaaaacaat tagtggtgta 240
 tggtagagat tggggcaatc ggtatcttgg cgatgtgat gtagctgata cggacacaat 300
 gacctgggca aagtgactg tcaaggatt ttcaccgg 338

<210> 1444
 <211> 409
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1444
 gccaaaggcca caaccatcaa caccaccacc agtttggcgg tgatcattct tctccctctt 60
 cgctcgccat ggctgggtgc gcaagggggt tagagagnga gaacggcgga aatgggagat 120
 ggcttatgca ggagactctc acgctcctcg agatcaggtc cgaggctcga ctctagggtt 180
 aaggaggcca accaaaaggg tctctcttgg gacgaacttc cggattatgt cggagaacaa 240
 tgggtatcaa cggagcggca agaaatgcag ggaaaaattc gagaacttgt acaagtatta 300
 caagaagacg aatgaacgaa aagcgggtag gcaagacggt tagcactaca ggttctcttcg 360
 tcaagctcga agctctctac ggagagaacg ccaatttgaa ttccatcct 409

<210> 1445
 <211> 304
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1445
 gaactgttgt acatggatgg acaggctgac atcaagcagc gccaatcctc cattaatgcc 60
 ttcaatgacc caacgagtag agtgagggtg ttgcttgccct ctaccaaagc atgtgtccgaa 120
 gggatttagtc tgggtgggtgc ttcaagggtc gtgttactag atgtgtgtgtg gaatccgtca 180
 gttgacaggt agggccataag ccgtgctaca gacttggaca gaagaatcggt gtctatattt 240
 atcatctgat cacttctggg acaatggatg ctgagaaata ctgtcaacgg gtgtgaaagg 300
 aac 304

<210> 1446
 <211> 332
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1446
 ggctccccgg gagaggccca acgcgcgtcac cgtcgccgtc agccccaggc cccaggggcg 60
 cgccaaaggag atccgctttc gcggcggtcag gaagcggcgg tggggcgctg acgcgcgcga 120
 ctctcgcgac ccaggcaaga agaccgcgct ctggctcggc accttcgaca ccgcgcgagg 180
 ggccgccccg ccctacgaca cggcgccgag tgagttccgc ggccgcaagg ccaagaccaa 240
 ctccccacc gccgacgagc tcgtcgctgc cgtcgccgcc ccgcgccgca gccccagcca 300
 gaggcagacc gtcgacaaag cctccccctc gc 332

<210> 1447
 <211> 349
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1447
 gtaaaacaac ctccctcagc tctctctcac cactggtttt tgagatgatc tgggtgctcg 60
 gcgcggttga ttattatgtc ttattctgac ttgctgaacc tgctgtttgc cgtgggctgt 120
 tgggtgcacg cgtatattgc ggctgccgtt ctcgagtcgc tcgggtctct ccatactctc 180
 tggctgtttt gatttcgata gctgttttccg aaggctaaaga tgggctacgc acagctggtc 240
 atcgccctcg ccggcagtg caagtcgaet tattgtctga gtttgatca acattgtgaa 300
 gctattgggc ggacaataca cattgttaac ctatagctcg cagcagaga 349

<210> 1448
 <211> 362
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1448
 ccgcaacgag gcgataccat ctcggcccg cgtcttgcgc tccccctccc aatccccatcc 60
 atccccctat ccatccatcc atccgcccga accctccctt tctctctcca tctctctcgc 120
 gcagatcatg tccgagccga gccgcccggc gcgccgagca cgtcccggaa gtcgcccgat 180
 cggcaccgaa ggggacagta caacagcagc agcagccgca gcaacaggtc ggcgcccgca 240
 gccccagtac aggggcgctg ggaggcgggc gtggggcaag tacaccgccg agatcagcga 300
 ccccgtaacg aaggcacgag tctggctcgg cactctcgcc tccgcccagg aggggcccgc 360
 gc 362

<210> 1449
 <211> 281
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1449
 cagcagacca gaccattcca ttccattcca ttccgcatc tctactacag actcgcgagag 60
 atgggtgaaga gagacagaga ggcgcccagg tcgaagccct ggcgngggcc aactgcttga 120
 tgctctctcc cagagtcggc gaggtcgccc actcgaaacg cgaatcggcg tctacagagc 180
 ggatgttcgc gtgcaaaagac gtgcaaccgc gaggttctct cattccaggc gctcggaggag 240
 catagaacca gccacaagaa gcgaagctg atccccggcg g 281

<210> 1450
 <211> 389
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1450
 aagaagacga agcagctcat ccgaccatgg tgttggtatt gcgaacgaga atttgaagat 60
 gaaaaagttc tcatgcaaca ccaaaggcaa aacatttcaa atgtggaatg tgcctctgct 120
 gtttgaatac tgcttggtgt ttggctgttc atattcagca agtgcaacaa ctcgaaccgg 180
 aaaaccttcc acgtatagaa aatgcactac caggaagaga tggctacgaa gttgaaatct 240
 ttggtatggt gggaaatocca gcacctgatg tcgccgacta caaacgacgc aaggaaaatcg 300
 aactgggaact ggcagcagga tccatttcac agcctctcgc caagcgctcag aaaatggatc 360
 accggccgat atctcagagc gaattgaag 389

<210> 1451
 <211> 381
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1451
 gctgcgctgc cctctccctt ttgaccgttg ctctctcccc ttctctctct accaacgtct 60
 ctctctctct ctctctatct gcactgtgat tccctcacct tctcgagcc tcgccatctt 120
 cctctctccc aactctctgc tctctcgctc gctcgctaca gtcagatat ttccgcatca 180
 atctcgaaac gcttacggag atccttatgt atctgggtgat aagcataaga gaacacctt 240
 gtgaattccg ttctgatttg cattttaaaa gttcatatgt tgaagagat tggaaatctg 300
 aggtgcaaga tgggggtgtt cctcatcaag cttgacgatg aagaggcggt caagctatgt 360
 aaggatcgga agcgattcat t 381

<210> 1452
 <211> 381
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1452

```

ggcgagctct cttatctctt tcttctctct gctccacctt aaacctctgc ccggcaaaac 60
cgattcgagg tcgagagtcg agtaaaagat aatgtggaga agcttatgaa gatgggggtt 120
tcagttccgca ctggtggaaa gggatccatg agaagaaaga agaaggctgt gcacaagaca 180
actaccacgg atgacaaaag gctccaaagc actctcaaaa gaattgggggt taatgtctatt 240
cctgcaattg aggaagtcaa catcttcaag gatgatgtt tcatccaatt tghtaaatccc 300
aaagtccaag cctctattgc agccaataca tgggtgtgta gtggtgtctc tcagaccaag 360
aaattgcaag atatctctcc a

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<210> 1453

<211> 378

<212> DNA

<213> *Eucalyptus grandis*

<400> 1453

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tttttttttt ttttttcagc aatggaagaa caaactgttt tccaactgaa agtacaataa 60
actcctaatic tagaattagg taaatgctta aatcctgcta cctacaaaatg tgaaccacga 120
tgacaagggtt cccaacacca aatgttttgg acgatgtgaa aacttgacga cctgacacga 180
attagcatat accaacctaa cgaactacg agggggagag agcttatggg cacggcacca 240
gctatatcaa gtacgcatac tcttattgct gcaggaggga cacttgtaact gcttgatgtg 300
ctacgcctcg gggggagtta ttttcacgca ttcccatgg aaccacttct cgcacatgtc 360
acaacagatc cagaactc

```

<210> 1454

<211> 339

<212> DNA

<213> *Eucalyptus grandis*

<400> 1454

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atgctgctgc cacgaacagc cgttttacia tcttttacia tccaagggcc agtccatcgg 60
agtttgtcat acctctggca aaatatgtga aagcagtcta tcacacaagg gtatctgttg 120
gcatgcgatt cagaatgctt ttgagacag aagagtcaag cgtctgtaga tacatgggga 180
cgataaacagg cattagtgat ctggatcctg ttcgctggca aaactcacat tggcggtcag 240
taaagggttg atgggatgag tcaactgcag gtgagaggga gccaaagata tccttgttggg 300
aaattgagcc actaacacaa tcccaatgt atccttctc

```

<210> 1455

<211> 372

<212> DNA

<213> *Eucalyptus grandis*

<400> 1455

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gtcggtgtta ggagattaat gagacagcaa agtaacatgc catcctctgt tatatctagt 60
cacagcatgc atcttggggt tctggccact gcattctcat ccattgcaac tggaaactctc 120
ttttctgtat tctacaaacc aagaacaagt aggtcagagt tcattgtgag tctcaataaa 180
taccttgaag cacgggccca caagctatcc attggaatga ggtttaaaat gaaatttgag 240
gggtgaagaag tttcagaaga aaggttcagc ggcacaatca ttggtgtagg agacagcatg 300
tcatctggat ggactaatc tgaatggaga tccttaaagg tccaatggga cgaaccttca 360
tcaatcattt gg

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<210> 1456

<211> 436

<212> DNA

<213> *Eucalyptus grandis*

<400> 1456

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gcaacgtagt gtttccatag caactcaaac aacaaaggaa ctgtgtttta aggattatgc 60
tctggagtca gatgagacaa gaatatcaaa agcagcgaga aaaaatgggt ccagccttgc 120
tggaagtctca gctcatgtga catgcaagga acctttgcgt gcttcaatat caaatcagct 180
aaaaaattcg ctccagggtc tgaatctatc tgcgtgaact ctgaccagg ctgttcaact 240
ggctaccaat gataatcttg accttggctg tgcagtcatt gaacgggctg cagctgataa 300
ggcaattcaa accatcgatg gtgaaatc tcaacaactt aacctaaaga aacataggga 360

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gggtgttgcct ccagcatttt ttgaagccac tgtatttggc caaggttcaa tgggcattct 420
 cccagaggct cttcgc 436

<210> 1457
 <211> 352
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1457
 gcgcggcgga ccggggggga gctggaaatg aagtgcctgt actgctcgcc gtcgtcgag 60
 gggcggtgct ccaccgcgg ccggcgccgc tgcataccg agtgcaactc ctgcggcgcc 120
 gtgctggagg agcgccacca ctctccctcc ctccccccc aagccctagc cctcgccgac 180
 gcgcagcgcc accccttcga gtccaccggc ttcataccg cttctccac ttggtccctc 240
 gagcaactcc cgtctcctc cgtctcctc ctctcctct ccggccacct cgcgcgagtc 300
 ggcgggacc tgcagtcac caacccctc tctctcctc cctcctcgcc ga 352

<210> 1458
 <211> 364
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1458
 gagaatttta agatcccggt ggagttcaac ggtttgccgg agtttgcccc anatgttact 60
 cgtgacatgc ttgatgtcag gccgggggaa gctctcgag tgaacttccc actccagcta 120
 caccacagc cagacgagag tgttgacatc accaatccaa gggatgggct actaaggatg 180
 gtgaaatcgc tttctccgaa agtgatcaca ttgatcgagc agggatcgaa cagcaaacat 240
 acaccgttcc tgacaagggt tgtggagacc ctgcactact acttgccaat gttttgagtc 300
 attgacgtga ccttgcaccg agacaggaag gagaggataa acgtggagca gcactgtttg 360
 gcaa 364

<210> 1459
 <211> 224
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1459
 ctccagaagta cttcatcagg caatctaacc tgtcaaaag aaaaacgact tccagtcctgt 60
 ttgatattgt ggcagaggaa tcggttgatg tgccaatgg atcaagggac ttctttgcgg 120
 tcgacgagca acagcaggaa acagaagtaa atgatgcctt gcagcagctg cccactgatg 180
 ttgatgaaga atgtgaatct atggactcca ccaactcaaa tact 224

<210> 1460
 <211> 363
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1460
 gggaaaggcc ctcgaaaaatg ggttcggttc ggctgcaggc gagctcagga tccgattggc 60
 acccgaggct ccgtgggggtg gccgatgatg aaaggaaag gaagaggatg gaggccaaca 120
 gggaaatccgc caggcgctcc cggatgagga gccagaaaga gctgggggat ttggtcggag 180
 aagtggggca actgcagcag gctaacgctc agctcgcggt gaggatcaat gctgctcgcc 240
 agaagtatgc caggttcgag ttggcaaaaca atgtcctcag ggcccgaggc atggagctta 300
 cggagaggct ccggtccctg aactcggtac tcgagatcgt gaggttgcta gtggcggtgt 360
 gat 363

<210> 1461
 <211> 351
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1461

gtttgcccaa	ccatggtcca	ctccctactt	caggagaaaa	tatcttaattg	tctgagcttg	60
cagagtgtctg	caagggaattg	gaagaagggc	accgtgcttg	ggctgcacac	aagaagggaag	120
cggcatggag	gttgaaacga	ctggagttgc	agttggagtc	ggagaaggcg	tgcaggaggga	180
gggagaaaa	ggaagagata	gaggcgaaaa	tcaacactct	caggggaagag	cagaaagctt	240
ctttggataa	gattgaaaca	gaatacagag	agcagctggc	aggattgagg	aaagatgcag	300
aatccaagga	gcagaagctg	gctgaacagt	ggacggcgaa	gcattgtcagc	t	351

<210> 1462

<211> 209

<212> DNA

<213> *Eucalyptus grandis*

<400> 1462

gttcaatcag	ctcgaccoga	ggatcaacag	gaagcccttc	agcgaggaaag	aggaagagag	60
gtctcttgact	gcacacaacg	tgtgtggcaa	taaatgggcc	atgatcgctc	ggctctctccc	120
cggccggagc	gacaacggcg	taaaagaacca	ctggcacgtg	atcgctcgca	ggaagcagag	180
agagcagtc	aacaacgcc	cgggccgga				209

<210> 1463

<211> 423

<212> DNA

<213> *Eucalyptus grandis*

<400> 1463

ctttgggttt	cttctcccat	ctctctcgct	ctctcttttg	gattcgtgtg	ttctttcttc	60
ttttttgac	cacccgagat	tttccgaaag	ctgaagtggc	cggggagtga	agtttaagag	120
agagagagc	atcaccaaaa	gcccgaaagt	catggggaga	ggaagatcg	agatcaagag	180
gatcgagaac	acgacgaacc	gtcaggtcac	cttctgcaag	agaaggaaac	gactgttgaa	240
gaaggctctc	gagctctccg	tcctctgtga	tgccgaagt	gcctcatcg	ttctctccag	300
cagaggagcg	ctctacgagt	actccaacaa	cagcataagg	tcaactatag	agaggtacaa	360
aaaggcta	tcagatagtt	caaacacaag	cactgtcaca	gagatcaatt	ccagtgatata	420
tca						423

<210> 1464

<211> 379

<212> DNA

<213> *Eucalyptus grandis*

<400> 1464

ctcgatacag	ctcttaagcg	catcaggacc	aggaagaacc	aactcatgca	cgagtcgatt	60
ctctcagctgc	aaaagaagga	aaaatctcta	caggagcaga	ataacgtgct	ctctaaaaag	120
atcaagaata	atgagaaggt	aatgagagag	agtggaacat	ggagagcaga	aacccagcga	180
cgagaccatc	cctctctcat	gctacaaccc	actttgcctc	ttctctccct	caccattggc	240
aacacgttcc	agacaccgca	tgtaacttga	ggagcagaac	aagaggagag	atctcaagcc	300
cgaccagcca	acacgctcat	gccgccttgg	atgatacgcc	gttcaaatga	atagagagat	360
agagaccaac	aacatctct					379

<210> 1465

<211> 334

<212> DNA

<213> *Eucalyptus grandis*

<400> 1465

catcacacag	gttgatttga	gaactgaaat	caagatcgct	gtcgtcgctg	tcgtttctctg	60
cggtgtgctg	cggccgcat	tgactcgccg	taacgaacga	agccggttgc	gacttaggg	120
tggtgggggg	cgcggaggaa	gctcgagcct	cggtcggttg	ttttcttttt	ctttttttgc	180
gatcatggaa	ggcgtcgccg	tcgatcacc	ggccgatgag	cggcagaagg	cgcggttgcg	240
ctggaggagg	atgaaggtcg	tcgtggccgg	ctctagccac	gccgtcgagg	ttcccgatcg	300
catggcccg	tcgtgcggag	cgatccggcc	tttc			334

<210> 1466

<211> 371
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1466
 tctctctctt cgaaaaacct ttctctctct ctctctctcc tctgtgattg cagatcaggc 60
 tctcgcgcga cctccattcgc cctctctctc ccacgcggcc actgtcccgt 120
 cgcgcgaatt cgcgcccgcc tctgtaggaga ccgcattctc cgcgcgcgcg gcgatggcgg 180
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 tcctggaga ctcaaatctt gtaatcactc cgtgtttga gaaaatgttg agtgctagt 360
 atgcaggtaa a 371

<210> 1467
 <211> 456
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1467
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 tgttttgcac cacatgccag atgaaagcgt cagtaccgat aatcacgcgc atcggtctgt 180
 gcgatgggtt aagagctcat ccccaagggt ggtcaccctc gtggagcaag agtctaaac 240
 caacacgtcc ccatctcata caaggttcat agagactttg gactattata ccgcaatgtt 300
 tgagtcattt gatgtagcgt gccgacggga tgacaagcaa aggatcagtg cggagcagca 360
 ttgtgtcgcc agggacatag tcaacatgat agcttgtgag gagacggaaa ggggtgaaa 420
 gcgatgaact ttggggaaat ggaggtcaag gtttag 456

<210> 1468
 <211> 417
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1468
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 cctagagctc gcacttgagc catgttcacc atctctgta tcatcaccag catcactcca 120
 tctcttgcga gttcctgcaa aagacaacaa gctttactca tgcaacttct gccaaaaaa 180
 gttctatagc tcgcaagcga ttgggggtca ccagaatgct cacaagctcg agcgaacct 240
 agcgaagaag agcagggact tgtgctctgc cgcaaaacct cctgcggcga cctcgaatgg 300
 tcacacatga cggccatctt ttcaatctgt ggtttatgag aatcagccac gcttgcccag 360
 gcgatgtggg gatgatata ggtatgctg gactaatccg ctgtatggtt catctt 417

<210> 1469
 <211> 460
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1469
 aggatcgaga acaagataaa ccggcaagt agcttcgcga agcggagaag cgggctgtc 60
 aagaaggcgt acgagctctc ggtgctctgc gacgccgagg tcgcgctcat catcttctc 120
 agccgcggca agctccatga attctgtagc ggcccaaggt atcgctattt tgtatgttat 180
 cacttgtttt tctcgttaat gttatgatga gacatcagg ggagaaaccc agaactgaga 240
 tcacactgtt tcattaaatt ctctcgtcca aattctttc ggaacacctc agactcttgt 300
 gatctggatc ttggtgctgc cctaaggaga tggcgattta ttggtttttc ttctttttt 360
 ggtttcagtt tcttgactct ttttcgcat tttccgttca ccatgaaaaa aagctttcag 420
 ccgcacagtt tctgtctcc tggggtttct gatcttctc 460

<210> 1470
 <211> 408
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1470

gaggaagccg	tgcgcgtcga	gccgagtcag	gaggtcttcg	atcgcttctt	cgccggettg	60
ctcgttgatt	cccccgaggg	cggaccggcc	gaggcgaccg	acggcgcgag	cgacaaggag	120
tcgaattcat	ccgacggcgg	cggcgccggc	ggcgcggaac	gggatgagaa	gctggctctc	180
ggagataacg	agcttttcga	ggacgctgat	gatgatgatc	ccgtctctaa	gaacacagaga	240
aggcagctca	ggaataagga	tgcgcggcgt	aggtcgaggg	agaggaagag	aaggtacgtg	300
aaagagctgg	agatgaagag	caatatatg	gaaggggaat	gccgcaggct	ggggcggttg	360
ctccagtgtc	ttgtgctgga	gaatcaactc	tgctctgaa	tttgagaga		408

<210> 1471

<211> 530

<212> DNA

<213> *Eucalyptus grandis*

<400> 1471

gcagaatctg	tagtatatat	gacgatgaaa	gggaaatcta	tcaactgccct	tactgtaact	60
tggtgcgtgt	gggaaggaga	ttgggcattg	actattttcca	ttgcatgaac	tgcaatgcct	120
cgatgtcgcg	ctccctttca	gttcacaaat	gcagacagaa	atgcttagaa	gataactgtc	180
ctatttgcgc	tgagtaacat	tttacaatga	actctccagt	aaagcccttc	ccctgtcgcc	240
acttgatgca	ctcggcatgt	ttccaggagt	atacttgatc	tcactatact	tgctcgatgt	300
gtagcaagtc	actaggggac	atgcagggtt	attttaaat	gttggtataga	ctttttggccg	360
aagagcaaat	gccagatgag	tattctggca	agaccagggt	tattctctgc	aatgactcgc	420
aagaagagag	aagcacatct	tttcattggt	tttatccaaa	gtgccgtcat	tgcggttcat	480
ataaacacag	gctgtcttga	ttccaaacta	agacgcata	atataactct		530

<210> 1472

<211> 381

<212> DNA

<213> *Eucalyptus grandis*

<400> 1472

ttgcgcgcc	actgaagcac	agctgcgagc	tactgggtga	gaaggacggc	gcggggcagct	60
ccgggtataac	caagggcgag	acaccacggc	tcaagtgtct	cgaccagagc	ctgaggcagc	120
agagggtctt	ccaccagatg	ggcatgatgg	agcaaggagg	ctggaggcgc	cagcgggggcc	180
tgccggagag	gtcgggtcaac	atactgcgtg	catggctctt	cgagcatttc	ttgcctccgt	240
atccaagtga	cgctgataag	catctgttgg	ctcgacagac	tggtctctct	agaaacagag	300
tctcgaattg	gttcataaat	gccagggtcc	gggtgtggaa	accatgggtg	gaggagatgt	360
accagcaaga	gtccaaagaa	g				381

<210> 1473

<211> 567

<212> DNA

<213> *Eucalyptus grandis*

<400> 1473

cacggcaaca	aatggaagac	aagaagctgt	tcttctctac	tgagggatcc	cttctttata	60
ctcgtgttca	ggtagtctct	ccacctctct	aagcaggact	tggtcatcac	gttaaggggga	120
gtgttcacgc	gctgagacac	aaggtgccac	tcctctgggc	catactgttt	ccatatgaca	180
cgtaacaagg	cgctctcttc	agctctccaa	cgctgtcttt	cttctatctg	caggtgtaga	240
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gataatacaa	attagaagta	atttctcaca	tcacaata	atacacgaca	tttagctga	360
gttaactggg	ctgagaaaag	aaaagaatcc	caaggaggag	acagggttat	ccaaggaaat	420
gccggcgttn	catggtctct	gcggtccata	cgggatggcc	atcgacgggt	gtcatagcgg	480
aaatgtaac	agtttatctg	agaattgcca	gagattgaac	atgctcggtc	catacgatca	540
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<210> 1474

<211> 423

<212> DNA

<213> *Eucalyptus grandis*

<400> 1474
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 ctctctctct ctctcgcacca tggcccgacc gcagcagcga tatcgcgcgcg tgcgcagag 180
 gcatctggggc tctctgggtct ccgaatttcg ccaccggtta ttgaaaacaa gaatttgggt 240
 agggagcttt gaaacggcgc aggatgcggc tcgagcctat gacgagggcg caaggcta 300
 gtgcggggcg agggctcgga ccaacttccc ttacaaccca aacatgtctc agtctctctc 360
 gtcgaaagtc ctctcggcga cattgacagc aaagctccac aggtgctaca tggcctcggt 420
 gca 423

<210> 1475
 <211> 402
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1475
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 agccgtacag gggatccggg atgaggaagt ggggttaagt ggtggctgag atcaggggagc 180
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 cctacgacac cgtctgtgttc tactctcgtg gccctctcgc cgcctcaac ttccccgacc 300
 tcatcttgca cgagggccag gactcgtctg gtgaggtctc agccgcctcc atccgcaggc 360
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<210> 1476
 <211> 269
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1476
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 tgcgacgcca aggtctccat catcatgatc tccagcaccg gcaagctcca cgatgacatc 180
 aagctctccc acctcaacga agaagatgta cgatcagtat cagcaggcgc tcgaggttga 240
 tctctggagc tctcactatc agaagatgc 269

<210> 1477
 <211> 297
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1477
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 ttccaatcaa tatgtctcat taaattgcgg aaactgtcgg acgatgctga tgtatccatc 120
 tggagctcca tctgtgaagt gtgcgatctg tcaattttat actaacgttg gtgcggggcaa 180
 tccaaggggt tctgttccac cacaagaagt cgatggacca cgttcaggga caaacccgtc 240
 tacttcaacg tcaatgcccc aatctactca aactgtagtgt gttgaaaacc ccatgtc 297

<210> 1478
 <211> 408
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1478
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 gcttgttgaa ctctgccatg ggttcatgta catgtggagg tcaatgaatg aataccatga 120
 gattcagaac aacatttgtc agcaagtcgg gggccttgtg aaccgagcaa acaagggtga 180
 atctactctt gaattgcatc ggcaggcaac tctgtgacct gaatcagctg tttcttcatg 240
 gattccaggt ttctgcgctc taattaaagt ccagtgtgat ttcatcgtt cccttcaagg 300
 ctggttcaaa ctgactctcc ttctctgtga caatgataac aatgggagcc aggaacactc 360

tgatgcctat gccttctgcg atgagtggaa gcttgcaacta aacatgtc 408

<210> 1479

<211> 317

<212> DNA

<213> *Eucalyptus grandis*

<400> 1479

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aagccttaca	ataaatctac	tattagctga	gtattgggtg	tcgaataatt	tgccaggaagc	120
cacgaactat	tggaactcga	tctcatggct	tcttcgagcg	gaacgtcttc	cgggtcaacc	180
ttgatccaga	actcgggac	agaggagagt	ctgcaggcct	tgatggatca	gaggaaagag	240
aagaggatga	tctccaaccg	cgagtcggcg	aggcggtcgc	ggatgaggaa	cgagaggcac	300
ctggacgac	tgatgct					317

<210> 1480

<211> 411

<212> DNA

<213> *Eucalyptus grandis*

<400> 1480

tgctattcca	ttgaacactt	tgccatggaa	tgcaagaag	atgatgacca	ggtttcacca	60
gaaacgggtga	accccaaaac	accctctatt	gaggaagaat	ctgctaaaac	gaaagcttct	120
ggcatcgatc	aagaacaggg	cgattcgtcg	aactcgcagg	agaagccccc	cctgaagaag	180
cgggacaaga	tcataccttg	cccgcatg	aacagcatgg	acaccaagtt	ctgctactac	240
aacaactaca	acgtcaatca	gccccggcac	ttctgcaagg	cctgccaaa	atactggagc	300
gcccggcgga	ccatcgaggaa	cgttcccggtg	ggagctgggc	gcccgaagag	caagagctca	360
gcttcgcatt	atcgccagat	cactctctct	gangctcttc	aagcaagctc	g	411

<210> 1481

<211> 401

<212> DNA

<213> *Eucalyptus grandis*

<400> 1481

gtccgtggag	ccatcgaaag	tcccagagcc	acgggaaaaat	tggctgcgcc	tgtaaaactcg	60
cccagcatgt	cctcatcatt	ggacctgaag	aattcttgca	tggatgcaaa	tgccaaacctt	120
gtgagcattt	tgcaacctgg	tgtagtggca	cctgaagcct	ggttacagaa	tgaaagagaa	180
ctgaaaaggg	agaggaggaa	acagtcgaac	cgtgaatctg	ctagaagatc	aagactgagg	240
aagcaggctg	agactgaaga	acttgccaaa	aaggtggatt	ctctgagtcg	cgagaatagg	300
gctcttaaat	ctgaaattag	tcaactaac	gagaactcgg	ataaattgag	gctagaaaaat	360
gccacattga	tggaagact	ggaaaatgca	caggagtgga	a		401

<210> 1482

<211> 438

<212> DNA

<213> *Eucalyptus grandis*

<400> 1482

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caggtcgtgg	agggtggttag	cggtcgcgc	atcgatatac	ccgagatacc	tgatccgctt	120
atgaacccat	ggcagctgcc	ctgcccgatg	cagccaatta	cggcgtctgc	cgacatgttg	180
cagctgtgag	catcagattg	gaagtgtaaa	agttggggct	gattctcttg	gagtcacctt	240
ctggggggat	ggtagatcca	tagccatttg	ctgcttttgt	tttctctgtc	aattccgttc	300
tctttcttga	agttggaact	ccaatatctg	tatgcgtctg	tctagatgga	ctggcgcttt	360
tatgtctgct	tgacattgta	cttggtctgt	cttctgtgtt	acttatggga	tgttcctggt	420
ctaaaaaaa	aaaaaaaa					438

<210> 1483

<211> 370

<212> DNA

<213> *Eucalyptus grandis*

<400> 1483

cagtcggggt	tgccgttaga	tgataggccc	gagggagctc	gctccccctc	tccggaacct	60
atatatgata	atatggggat	taggatcaat	acgagagagt	atcgtgctcg	tgagcgtctg	120
aacaaggaga	gacaggacat	tattacacag	attattaaag	ggaatccagc	gtttaagccc	180
cggcgtgatt	ataggctctc	caagctacag	aagaagctgt	acataccgat	gaaagagtac	240
cccggttaca	attttattgg	acttataata	ggacctaggg	gcaataccga	naaaaggatg	300
gaacgtgaaa	ctgggtgaaa	gatcgtcatt	cgnggaaaaa	gttcagtgaa	agagggtagg	360
ttgcagcaga						370

<210> 1484

<211> 335

<212> DNA

<213> *Eucalyptus grandis*

<400> 1484

gagagggaga	gcaggaagaa	gggcggcgcc	ggtagcggcg	agtcacaa	gggagggaaa	60
ggctcgaggt	cgatcaggaa	gagaaggag	gggattgctt	ggaccaggga	agaacacagg	120
tggcgtcttc	ttctgttcaa	tcggttattt	cttctaggcc	tagataaata	tgggaaagcc	180
gattggcgaa	gtatttcccg	gaactttgtc	gncacaaaga	cgctacagca	agtttgcgagc	240
catgcacaga	agttattttat	ccgtctgagc	tctgttaaca	aagataggag	gcgatctagc	300
attcatgata	tcactaccgt	aggcagtgga	gacct			335

<210> 1485

<211> 371

<212> DNA

<213> *Eucalyptus grandis*

<400> 1485

gtggttttgc	cgctctcggg	gatggtgaaa	tcgagcggag	gcgcggggga	ttctgatcat	60
tcagatcttg	aagcgtccgt	cgtgaaggaa	gctgatagta	gcagagtcgt	tgagccggag	120
aaaaggccgc	gaaagcgagg	taggaaacct	gccaatggcc	gagaggagcc	attgatacat	180
gttgaggccg	agaggcagag	gagggagaa	cttaaccagc	gggtttacgc	gctccggggc	240
gtggttccca	atgtttccaa	gatggacaaa	gcgtcacttc	ttggcgatgc	gatagcgtac	300
atcaaggagc	tgaactcgaa	gctccagacc	acggaaatctg	acaaggagaa	tctgcagaag	360
caaatggaat	c					371

<210> 1486

<211> 373

<212> DNA

<213> *Eucalyptus grandis*

<400> 1486

accaccacca	gtaccaccac	ctccctctct	ctctctctct	ctctctctcc	ttttccctct	60
gttcgtgttc	ggtacgattg	cgaagcgaaa	agcgaatgct	ctctctcgga	ttgccatgaa	120
ctccaacgct	tctctcaaac	cccatcgat	ggccacctcc	acgacgtcgg	cgaccaactcc	180
ggcggcgggc	ggcgacggcg	gcaagaaggt	caggaaagccc	tacacgatca	ccaagtccag	240
ggagagctgg	accgaggagg	agcacgacaa	gttcctcgag	gcctccagc	tgtttgaccg	300
cgattggaag	aaaattgagg	attttgtggg	ctcaagact	gtcattcaga	tcggaagcca	360
tgcccagaaa	tac					373

<210> 1487

<211> 319

<212> DNA

<213> *Eucalyptus grandis*

<400> 1487

gagatggtag	taaatacagag	cctcggagag	cagctcgagc	gatgatgatg	atttgtacaa	60
gaaaccaagg	gaagaaacaa	taaaggcgaa	gatcacgagg	gtttattata	ggaccgaagg	120
gccagcgact	agccttattg	tgaagatggg	acaccagtg	aggaagtatg	gacaaaagat	180

caccaggggac	aacccttgctc	ccagagctta	cttcaaatgc	gctcacgctc	caagctgcct	240
tgtaagaag	aaggtgcaaa	gaagtgtga	agaccaatgc	gctatagttg	cgacttatga	300
aggcgagcac	aaccatcca					319

<210> 1488

<211> 384

<212> DNA

<213> *Eucalyptus grandis*

<400> 1488

attccattta	gcctctttcc	tcctcaatgc	gaagggttct	tcaaccaaat	ggacggcaac	60
ctctcattgc	aaatcggata	caatccgaca	tgctcggagc	agatgaatgc	ttcgggttcg	120
agccaaaatg	tgccgggatt	cattccggga	tggatgcttt	gaacttacta	catcgacttg	180
gagtggaat	cgagctgggt	aaatttgtgc	gcgtgtccct	tgtaaaaattg	cgatccgcaa	240
gacataaagt	acataatatt	ttggagctgt	gatgacataa	aaagagggaag	gccacccttt	300
cctctctcat	gatcagaact	tttgataatg	tctgtatggc	ccggcgagtc	aattggaacg	360
agctcagctt	tgcatgttct	ttcg				384

<210> 1489

<211> 411

<212> DNA

<213> *Eucalyptus grandis*

<400> 1489

aagagtggcc	gcctccgggt	gatcaactac	ttgcggcccg	acctcaagag	ggcgcttttc	60
tcgccacaag	aggaggagct	gatcatccac	ttgcattcca	tccttggcaa	caggtggctg	120
caaatccggg	ctcgggtggc	gggacgggac	gacaaacgaa	taaaagaactt	ttggaactca	180
accataaaga	agaggtctaa	gaactcgcta	tcattctctt	gtagacactc	gccaaacacg	240
agcgatttct	ccttgtctac	agacgtttaa	gatgtcatgg	gaggtctcat	ctcccttcag	300
gaacaaggac	tcattgccact	ttatatggac	tcgttgtcgt	ccgtgcaagc	tttggctctt	360
aaccagggtta	tcgatccatt	actaccctca	ctcaaccaa	ggcctcgacc	t	411

<210> 1490

<211> 396

<212> DNA

<213> *Eucalyptus grandis*

<400> 1490

gaaaaatggg	gagaggggaag	attgagataa	agaggattga	gaatgcaaat	agcaggcaag	60
ttacattctc	gaaaagcggt	tctgggttgc	tcaagaaggc	gcaggagctc	tctatcctct	120
gtgatgctga	gggtgtcgtc	ataatctctt	cgaatactgg	caagctttac	gagttctcca	180
gttctcggat	gaacacagata	ctatcaagat	acaacagggt	tcaagattct	ccagagctcca	240
ctgttgtaga	gtacaagcca	gagtcctacga	aagaagatga	taaggtggta	cgactcccaa	300
aagatgaaat	cgagagctgt	cagatgagac	aactaaaggct	actggggcaag	gacttgaatg	360
gcctgagcat	aaaggaattg	cagcaccttg	aacagc			396

<210> 1491

<211> 188

<212> DNA

<213> *Eucalyptus grandis*

<400> 1491

tggtatgtac	ttattgttca	attggatttg	actccaggta	accctaggac	ggagggaagag	60
catcgaaagt	tttttaattg	ttccagaaa	ttgggttaag	gagactggcg	agggatagct	120
ctgactcttg	tgactacaag	gactctact	caagtggcaa	gccatgccca	gaagtattat	180
atccggca						188

<210> 1492

<211> 461

<212> DNA

<213> *Eucalyptus grandis*

<400> 1492
 caccggaaac agtccatgtt cagaattatt ctccaattca tcaaatgggc attgatggat 60
 tctttccagc gcattccctcc ccacagaaac ctctgtacca ttcttactcc cccaacaata 120
 gacccaattt cctctctccg tccctcctcaa ctccacagtg ggactatttt tggaaacccct 180
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 atgatgagac cagagagattg aggcaggtcc gagaggaaga ggggattcca gacttggaaag 300
 aagaaactga gcacgaagaa tgtgatcacc actcgtatgt tgatgaagat agaggcaaca 360
 gagatgtctaa ttcccccact gaggaagtgt tagtggaaga tgttgatgac aggaagaggga 420
 tggagatgaa ggaacagaca cagctgtgaa tctgaggatg a 461

<210> 1493
 <211> 445
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1493
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 caccggagaa catgagccaa tccaagggct caccctgttc aaagggtggc aggggtcgcc 180
 gtaagaaggg aaataagagc acagcagact tgaggagtct tctgattctc tgcgcccaag 240
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 ctctctgctc tgggtgatggc tctcaagat tggcgcatca ctcttgcaat gggctggaaag 360
 caccgcttgc aggcagtgcc ggtgatagac aaaccttttt ctattctctc gaattgcaga 420
 agaggacagt agctgataaa gttga 445

<210> 1494
 <211> 419
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1494
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 aattgcttcc aaattggccg gaaggacaga taatgatgtg aagaactact ggaacaccaa 240
 gctgaagaag aagctaatag agcaactggc ttctctgaaa acagtgcctg aaagtaactt 300
 tgactatcag gtctcgccac agaaactcggc ctcaatcgat cctgagacca agaatacgga 360
 atatgctgct aattcaatgg gattcccca gcagaacttc aatccaggaa taccactt 419

<210> 1495
 <211> 388
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1495
 ccaatgggtga cagtggttaag gatgaccttg atacagatga atattgaaact catgccacag 60
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 acatgaagct agagtatcag aaaaagggtg ctcttgctaaa caagcagaag aaacgtggtg 180
 ctagtgggtga atccctggag aaaaacaaag cagctgtaag tcatttgcac acgacataca 240
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 agctgtaccc aaagcttgog caactgtgct atgggatggc gaatatgtgg gaaaaaatgc 360
 gcattgcatca tgataagcag gactctat 388

<210> 1496
 <211> 417
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1496
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cgacgacagt	ggtaagtccc	aagatgtcga	ggtgagaaaa	gggccgtgga	cgatggaaga	120
ggatctcatc	ctcatcaact	acatagcgaa	tcacggcgaa	ggcagttgga	actccctagc	180
caaagctgct	ggctctaaac	gtacccggaa	gagttgtcgg	ctccgggtggc	tgaactatct	240
gcgacccgac	gtccggagag	gcaacatcac	tactgaggag	cagctcctga	tcatggaact	300
gcatgccaag	tggggaaca	ggtgagatgc	acataagtc	cacaactttt	cgttacatag	360
gttttacaac	ataataccca	tcatcatat	tgaacaagg	tccccgtggn	atcacga	417

<210> 1497

<211> 404

<212> DNA

<213> *Eucalyptus grandis*

<400> 1497

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aggtggacca	attacctgag	gccagacttg	aagagagggc	ttttgtccga	gtatgaagag	180
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ctccccggaa	gaacagacaa	tgagatcaag	aatcactgga	acactcacat	caagaagaag	300
ctcaagaaga	tgggcattga	tcctctcact	cacaagccat	tagtcaccaa	caacgacaa	360
acaaccgac	aacaaccccc	ccaagcagcc	cagacccatc	ccca		404

<210> 1498

<211> 340

<212> DNA

<213> *Eucalyptus grandis*

<400> 1498

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aggaagcatg	tggagaggcc	ctctcatgat	ccaaaagctg	ttattactac	ttatgaggga	120
aaacacaatc	atgatgttcc	cactgcacaa	tctagcagcc	atgacactgc	agctccctcc	180
gctctaagtg	gactgccaag	aacaagatca	gaagtgaaa	cagtgagcct	agatcttggg	240
gtgggaagaa	gtccgcatc	agaaatggcg	tcagctgaga	agcagcagat	cctccggcca	300
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<210> 1499

<211> 311

<212> DNA

<213> *Eucalyptus grandis*

<400> 1499

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gaggaagacc	agatcctgat	ctccacatc	caccagtttg	gtcactcaaa	ctggcggtga	120
cttctctagc	aagcaggtct	gttaagatgt	gggaagagtt	gcagactccg	gtggataaac	180
tacttgcgac	ccgacgtgaa	gcgagggagc	ttcacgcagc	acgaaagaga	caccatcatt	240
gaacttcac	aagttcttgg	caacagatgg	tcggccatag	ctctcgagatt	gccggggcga	300
acggacaatt	a					311

<210> 1500

<211> 324

<212> DNA

<213> *Eucalyptus grandis*

<400> 1500

gttgaatggg	gattcaaaaa	atggcttcac	aaggcgcgcg	cggcagcagc	ggtaaatgcca	60
gaggtggcgg	tggcaataat	ggaaaatcca	ctgaagttca	gccattgact	cggcagaatt	120
caatatacag	tctcactctt	gatgaggttc	aaaaccagtt	aggtgattta	gggaagccat	180
tgagcagcat	gaacctggac	gagcttttga	agaatgtctg	gacagctgag	gccggtcagt	240
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gaagcgtttc	attaactggt	gcac				324

<210> 1501

<211> 380
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1501
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 aagaaaaagag agatggggag agggagggtt cagctgaaga ggatcgagaa caagatcagt 240
 aggcacagtg ctttctcgaa cgcacggact gggttgctca aaaaagccca cgagatctcc 300
 gttttgtgcg acgcccagct cgcctctatc gtcttctcca ccaagggaag cttttcgagt 360
 tttcgactga ctcttgcatg 380

<210> 1502
 <211> 347
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1502
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 aggaactgttg ataacgcagc catltggtctg gagctgcaga cgagaccgga gatggtgaag 180
 cgcgagatga gagcgcagc caggacgggt cattacagag gagtgaagg ggcggccatgg 240
 ggaataatg cagcagagat aagagacccc aagaagaacg gcgcgaggat ttggctcggg 300
 acttatcgagc tgcctcagga cgcggcattg gcctatgacc ggccgct 347

<210> 1503
 <211> 312
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1503
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 ctgtgtaata gngggggcgc catagctcgc taccttcttc agaggactga caatgatatc 180
 aagaactact ggaataccca ttggaagaag aagctgaaga agcttcaagg ccaagcaaat 240
 cctgatgatg atgaccataa tcatcaccca caaggggtta acgcaacttc acactccaac 300
 cccaagggcc ag 312

<210> 1504
 <211> 468
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1504
 agcacgggtc catgagcact cgcgaattga aattaatcct ccatcagaag catcaaaaaga 60
 gccactccca gatgaacat ctcttatgcc aaatgaggat tcacatcagc tctctccatc 120
 aagaactacc acttccatgg ccgaatcttc tgatttcggt agttccagtc acaaatggga 180
 agctcttccc atgtgttctag agaagcccac tgaagatggg tataattgga ggaagtatgg 240
 ccagaagcag gtcaagggtc gtggttttcc caggagctac tataaatgta gccatctcaa 300
 ttgctcagtc aagaaaaagg ttgagcattc tcttgatggt cgtataacgg aaattactta 360
 cagagggcga caccagcatg aaatgcctca agccaaaagg acttcaaaag atggtaacaa 420
 cttgaacagg agcacaatct ctctggctaa atctcaagct gttcttca 468

<210> 1505
 <211> 415
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1505
 caagctacaa tgggtgattca tatcacttga tatttaagaa ttgcaaccac ttctgcgaagg 60

atgttttgta	caagctgaca	gggaaaccga	ttccaaagt	ggccaatcga	cttcgcagaa	120
taggtttctgc	ctgcgactgc	ttctctctgc	aaaccttaaa	gatcactgca	gtacgtctag	180
aaccttaactg	ccaacctgac	gaaagtgcga	agcggagggt	acaaacaac	ttcagttgcc	240
tgctttcttat	atcaatgagg	cagaagcagt	tatctacatc	ctcattatct	cttcgtttctc	300
ccctgagagg	ctgctctaccg	ccttgggaac	tcaaaaggct	taacaatggc	tccttgaagg	360
aaagatgcga	aaatgcccgag	agtgaacta	catcacaagc	gatcatggag	cgctg	415

<210> 1506
 <211> 512
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1506						
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ctagagagat	atcagaagtg	caactatgga	gccttgaggc	cgaacgtgtc	cgcgagagaa	120
tccttggagt	taagctgtca	gcaggaatat	ttgagactta	aggcacgtta	cgaagcccta	180
cagcgaaactc	aaaggtattg	aagttttctat	tgctctttta	attaaatgtc	agcattcgcg	240
ggatgtagtt	attttctctac	agtattgggg	tctatctgtg	tcactcgnaa	ctaggaatct	300
tcgtggagaa	gaacttggcc	agttaagcag	caaagaactc	gagtccttgg	aaagacagct	360
agatgggtca	ttgaagcaga	tcagatcacg	aagagtattg	aaattatatc	cacgaattct	420
atctaagtca	catctcagtg	tattmgnaat	acaagttact	gnngtcaatc	gctgggatta	480
gtggtcatcg	gtctggctaa	ctttagtagc	ga			512

<210> 1507
 <211> 342
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1507						
tctagacaac	gatcaacagg	caagtgcagt	tcgcgaagag	gaggaatggg	ctcctcaaga	60
aagcctacga	gctctccgtg	ctttgcgacg	cggaggctgc	tctaactc	ttctcccata	120
gaggaaaagct	gtacagagtc	tgacagcagt	caagcatgct	caaaaccttg	gaaaggtatc	180
aaaaatgcaa	ctatggagca	cggagaccta	gcattctctac	ccgggaagca	caactggagc	240
taagcagtca	gcaggaatat	ctgaaactta	aggcacgcta	tgaagcccta	cagcgaacgc	300
aaaggaatct	tcttggggaa	gaattaggcc	ctctgagcag	ca		342

<210> 1508
 <211> 413
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1508						
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tgccccacac	gggtgatatt	aaacttcttg	ttggattctg	ccagatgtct	caggagacgg	120
agacatttgat	ggagattatc	tcacaggagg	acctaagaag	gattctctgt	gtctgtgcta	180
aagcagttga	agacaacgac	accttaaaat	ttgagtgatt	aatatcagag	ttacgcgcga	240
tggtgtctct	ttccggtgac	cagatccaac	gattatcagc	atacatgttg	gaagggctca	300
tagcaagatt	ggcagattcg	ggaagctcta	tttacaagac	tttaagtg	aaagagcctg	360
ctggtgcaga	gctgctatcg	aacatgcaca	ttctctatga	tatatgtctc	tat	413

<210> 1509
 <211> 296
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1509						
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aacagattcg	gagatttgat	gtgatggatt	tcgggtggag	aagtatgggc	aaaaggtgtg	120
gaaagggaac	ccgatcccca	gctactatag	atgcaccagt	gtcaagtgca	atgtgcggaa	180
gcacgtcgaa	agagcttcag	aagatccgag	agcctttata	acaacatatg	agggaaaaca	240
taaccatgag	atgccactaa	gaagtaccac	acagcaggct	cagagtcgca	tctgca	296

<210> 1510
 <211> 441
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1510
 attcctctctt ctctctcttc gaaaaccctt tctctctctt cgtctctctt ctctttctct 60
 ctctctctgt attgcagatc aggcctccac gcggttccat tgcgcatctt ccgacctctt 120
 ctctccacgc ggccactgtc cgtctcgctg aattcaccct gccgtcgtag gagaccgcat 180
 cctacgcgc gcggcgcatg gcggcgccac gaggagatgc cagggggaagg aatcaattac 240
 tctctcgtta ctggccacag ataacagatc aagagctaca acaaatctct ggagactcaa 300
 actctgtaat cactctctct tttgagaaaa tgttgagtgc tagtgatgca ggtaaaattg 360
 gacgtttagt gctgccaaag aatgtgccg aggcattttt ccggctattt ccagcctga 420
 aaggatttgc cgtcaaaagt c 441

<210> 1511
 <211> 315
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1511
 tgatgggaaa ctctcatggt ctcccaatct gaagagcttc ttcacaacag ctgcgtcagc 60
 aggtgatttc cagattcaat ggtccgagtt gcggcgacgc ggccgctgct ccggtagcat 120
 ctaaaagcat tgacctggaa agaaatagga ggaagaagct caatgaaagg ctcttcgcac 180
 tcagagccct tgcaccacag ataagcaaga tggataaggc ttcgatagtg aaagatgcta 240
 ttgattacat ccaagacttg cgtgaacaag aaggnaagat ccgagccgag atcgcacagac 300
 tcgaatctgt aattc 315

<210> 1512
 <211> 409
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1512
 gagagacaga agaattagaa cgacacgaac aggcagtgta cctactcgaa cgggaggaat 60
 ggcatcttca agaaagccca cgagctcacc gtctctctgc acgctagggt ttccatctct 120
 atgctctcgc gcaacaagaa gctccacgag tacatcagcc ccaccaccac gacaaaaagg 180
 atgattgatg attaccagaa ggctcttggg atcgatctgt ggactacaca ctacgataga 240
 atgcaagagg agttgaggaa actgaaggag gttaataaca attttcgaaa ggaataaagg 300
 cagatattgg gccacgattt gaacgagctg agctacgacg aactgcacag tctccgagca 360
 gacgatccga gtctctctgc aattcaagtg cgggaaagaa agtaccatg 409

<210> 1513
 <211> 323
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1513
 ggagagaggt gagaggcctg agacatataa gcagtgccaa atccgcaaca cgaaggcggg 60
 ttttaagccc ctccccctgg atcccgtaat tatgaagaag ctgaagtcga aattgaaaga 120
 ggggtacctt gatgatttcg tggttgacaa agatggtcaa tggatgtccc aaggatggaa 180
 aggtcgaggt ctttatgctt cctcctgttg ggaacctgtg tagaatttct ccaagtcttt 240
 atatgcttgt ccttttgggt tgagccgggg atagtattatg acgaccaagg aggaagctgt 300
 tggctgattc gtggcaagta agg 323

<210> 1514
 <211> 285
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1514
 gtaatgggaan gccacgagga gatnccaggg gaaggaatca attacttctt cgttactggc 60
 ccaggataac agatcaagag ctacaacaaa tctcaggaga ctcgaaactct gtaatcactc 120
 ctctgtttga gaaaatgttg agtgctagtg atgcaggtaa aattggacgt ttagtgctgc 180
 caagaaaatg tgcgagggcc tattttcctg ctattttctc gcttgaagga ttgccactca 240
 aagttcagga tgccaaaggc ttccggagtgg atatttcaat ttcgt 285

<210> 1515
 <211> 290
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1515
 aaaaactag tggaggccca gaattcggac acgagggttca gttagtgggt atataagttg 60
 gcaaggcact gacaacaatg gactccctag ggatgccttc ttgcttcccg gaatgtcggc 120
 ccagagagag aaaagagcac gcaacattgg gtccaaaagt aaaaggctgt tgattgacag 180
 tcaagatgct cttgagctga aaatgacatg ggaagaaact caggatttgc ttccggccacc 240
 gagtgtaaac ccaagcattg ttacagttga agaccatgag tttgaagagt 290

<210> 1516
 <211> 357
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1516
 gttcagttag tgggtgatata agttggcaag gcactganaa acatggagtc cctaggggatg 60
 ccttcttctg tcccggaatg tcggcccccag agaggaaaag agcacgcaac attgggtcca 120
 aaagttaaag gctgtgtgatt gacagttcaag atgctcttga gctgaaaatg acatgggaag 180
 aactccagga tttgcttccg ccaccgagtg ttaacccaag cattgttaca gttgaagacc 240
 atgagtttga agagtatgat gaacctccgg tttttggaaa aagcagttat ttataacttc 300
 gctccactgg gggacaagag caatgggttc aatgtgatag ctgtggtaaa ttgagaa 357

<210> 1517
 <211> 416
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1517
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 tgtgcggctg gaagagagat cttggaggct gtgaatcttg gttctcttct cttttgggtg 120
 acgggtcaca taacacgaat ctagggttct tgatcttttg tgggtgtctt tcgaattcga 180
 aggaagaaaa gccaaagaaac aagaaaaatgg gtgtggagac cactccogga tcgggctcgg 240
 aatgcagacg cgtgtgtgat ctgaacgtct acgatctcac gccattaac aattacaccc 300
 gctgtgtcgg ctccggcatc ttccattcgg gcattggaag tcatggcaaa gagtatgggt 360
 ttgggtccca tgacttccct gttagtgggg tttttgaagt ggaaccaaag agctgc 416

<210> 1518
 <211> 218
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1518
 attgcaccag tgtcgtgacc aaaaccacca cggctctccc catctctccc ggccgaaagc 60
 cctctcaatg aagcgggtgg gactccctcc gaaacccaac aagctttaca ggggagtgag 120
 gcagaggcac tgggggaaat ggggtgctga gatcagactt cccaagaaca ggacacgcct 180
 ctggctcggc acttttcgca ccgcgagga ggtgctc 218

<210> 1519
 <211> 337
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1519
 ctcaaacacg aaggcccttc ctctgcggnt tcaagatgta aagggaagg aagtgggtgt 60
 ttcagttcag attttggccc aataataaca gcagaatgta cgtgttggag ggtgtaactc 120
 cttgcataca atctatgcag ttacaagctg gagacactgt aacttttagc cgcattggacc 180
 ctgaagcgaa acttataatg ggtttccgga aagcatcaac ctctatgatg caggagaccc 240
 aactagctgc tgtttctaac ggtaaccatt caagtgaagc tttgatttct ggtgggtttg 300
 aaaaatgtacc tatgataagt ggttattcga gtctcctc 337

<210> 1520

<211> 439

<212> DNA

<213> *Eucalyptus grandis*

<400> 1520
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 accggttaaca ggacttgcac tgtcaaatg cgcacgctc atcggtctgc cagaaactca 120
 cggagagaga gagatggcgg agagagagga gaaggggaaag tacgacgaga tgaatgatga 180
 gaaggggagg gacggagggg tagcggaggt gaattccacg ccgaagaagg ggggtgacgtc 240
 caaggtttgtg gactacattg agaagctgat cgtgaagtgc atgtacgact cctctctgcc 300
 tccaccaatc ctgcgcggga acttcgctcc cgtgcgcgac gagaccctc cgcgtaccga 360
 cctcccgtc gtccggccatc tccttgattg cttgaatgga gaattcgtc ggtggggccc 420
 caatcccaag tttgccccg 439

<210> 1521

<211> 448

<212> DNA

<213> *Eucalyptus grandis*

<400> 1521
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 cgtgcgagaa gtgcataaat gtgctgtgag agggagaagg gtgcgaccgag tgggaagagag 120
 tttggccctt cggatctggg caactcgcca cctctcgcca taagtgcggg tctgcatttg 180
 aacaggccac gttttgcgaa gttttcactc cgaaggactc tggatggagg gagtgcgctt 240
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 attgtggcgg gatcaactgc gcgacctgtg cgaaaagtgc aggaactctg cctatcgcaa 360
 gtgatgagag gcctagttag tttggcatga ttaattgttc tactgggtgaa ctgcaatcta 420
 gtaccacaga caaccatttc gatagcga 448

<210> 1522

<211> 439

<212> DNA

<213> *Eucalyptus grandis*

<400> 1522
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 aacactagcc ccactcaact cattatcgc ttgcgtccta ctcaactgct atcgcgctat 120
 cccagcgagc acgtcctccc atgaacttct ccgacaagga agtgacgctc gcgtccgacc 180
 acccgaaaga gcccgccggg agaaagaagt tccggggagac ccgccacccc gtgtaccggc 240
 ggggtgcgtct gcgcgaactg ggcgaagtgg tctgcgaggt tcgcgagccc aaaaagaagt 300
 cgaggatctg gctcggcacc ttccctactg tggagatggc agcgaggggc catgacgtgg 360
 cagcgctcgc gctgagagcc cagtctgctt gcctcaactc cgcagactct gcgtggcgcc 420
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<210> 1523

<211> 361

<212> DNA

<213> *Eucalyptus grandis*

<400> 1523
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acgagagatt	gctgcagagc	ttccattccc	tgagataaaag	catcttcagc	ctgttgtgaa	180
gattgctgca	gattacatat	gcccatcaac	tggtgatccg	tcaaaggctc	cagggtggtc	240
ccctagtatc	tgagaaggtc	agatgaacgg	aaacccgcca	accacatgaa	acacctcttc	300
gcgggcgtct	ttccatagcc	agagagtatg	tggaaacacat	cggccttcgc	acctatgttc	360
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<210> 1524

<211> 422

<212> DNA

<213> *Eucalyptus grandis*

<400> 1524

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ggaggtcgaa	gccctggccg	tggccaaactg	cttgatgctc	ctccccgag	tcggcgagtg	180
cgcgcgactc	aaccgcgaat	cgcggtctac	agagcgggatg	ttcgcgtgca	agacgtgcga	240
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gctgatcccc	ggcgccctct	ttccactcgg	ctgcaccgcg	gattcctcgc	cagccaagcc	360
gaagaggcac	gagtgctcga	tatgcggcct	cgaagtcccg	atgggcccaag	cccttggcgg	420
tc						422

<210> 1525

<211> 443

<212> DNA

<213> *Eucalyptus grandis*

<400> 1525

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gtcagaccga	gaccggcgca	agcttgctcg	ggaggaccgt	tctactgacg	agggcgctcg	180
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cctcagata	atgaacctct	cgttgagcct	ctcgcgcgcg	cggcgctcgg	ccaggacatg	420
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<210> 1526

<211> 379

<212> DNA

<213> *Eucalyptus grandis*

<400> 1526

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cctgctgaca	gttccctacac	acgacatccc	tgaaccgccc	accgccaccg	ccgccaccgc	120
cgccaccgac	gctgcgcccc	acaccaccac	ctcgctctcc	catgacatgt	cccttaggaac	180
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cacgtgccc	gtggccagtt	ttcctacagt	tggtgcagtc	cttctcattc	gtacagtcag	300
ctgcaatgtg	cccttgcttg	tagcagttgt	tgcatagcct	caagtaccca	ggaggagcgc	360
tgcatctctc	agcaatatg					379

<210> 1527

<211> 419

<212> DNA

<213> *Eucalyptus grandis*

<400> 1527

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ttccggcgcc	gttgcgcttg	gtggttggtga	ttctctctcg	tcggggccgg	cagggttcagg	180
tccaaggaga	ggatgtgtgc	ggacttctcg	gtggtgatgg	ccgcagcagc	cggcggggtg	240

gtggggctcg	tcgcgtcggc	gctgggtggc	gtcggcgggc	ggcgcgacct	gtgcgcgctc	300
atgtggcgcc	ccaaggcctg	accgcacgcg	aaatcggaac	cacatatgtt	gcactcgtgg	360
atctcgggct	tgctcgtctg	atggagcccc	ttgtggctgg	ccaagtgggc	ggagaggggg	419

<210> 1528
 <211> 381
 <212> DNA
 <213> *Eucalyptus grandis*

cttgccctcac	gattgaagaa	gaaaagagca	gcagaagaag	cgtttccggt	gctatgggtca	60
ttatttttag	caatcgacga	acgggcaact	gagcgggttc	tcctttcggg	ggccctataa	120
acaactcggg	ctcaacatcc	atagactcgc	cgcggaattc	ttcacgaggg	gggtcgtctg	180
agaccggggg	caatcctttg	cgcgattcaa	tcctcttgag	tagctttctc	ttttcttcca	240
gtagtttccg	ctcctctgct	tttagccgct	caatatgtct	cctaattaaa	tggttctttc	300
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ccgaacagga	atccagaccc	t				381

<210> 1529
 <211> 524
 <212> DNA
 <213> *Eucalyptus grandis*

ctctcagcat	aatctctctc	tctctctctc	tctctctctc	tctctcgcgc	tctcgcgcagg	60
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agggcgaaat	ccggaccttc	ttctctttgc	tcctctctct	tcctgcagct	cgaaatcgat	180
cgcttctgct	gtcgcgtccat	ccgatcgaca	tgccgcgcag	cttccagctc	gacggcgacc	240
gcgctgcgcg	cgccctcccc	gattcgcgcg	ttgtcgatca	ggagaaaaat	ccgatcgaga	300
cgagccatga	ttatgctaatt	catggggggg	ttgtcgatca	atgcttggag	aagattgtgc	360
tccaagaaac	tgccctcgta	aaaggttgcc	agcacgccta	ctgtgtgata	tgcatctctc	420
gctggggctc	atgtaaggag	agaccaacct	gccctcagtg	taaaccatct	ttcgactctc	480
tcaacgttca	tcgctcgctc	gatggcagca	tcctgtatca	atgt		524

<210> 1530
 <211> 185
 <212> DNA
 <213> *Eucalyptus grandis*

gaactggctg	tctgggatca	acatagggaa	gcgagtgac	atgtttatca	aaaggaccaca	60
gaggtccaga	tgtagtccta	acagatnggc	tgtaataact	agcacagggg	atttcaccag	120
acatcggtcg	ccattgggtt	agaagagggg	ttggatgtcg	agattcatgt	ctagaagaag	180
aagaa						185

<210> 1531
 <211> 385
 <212> DNA
 <213> *Eucalyptus grandis*

tcagctagcc	gctccaccgc	cttcttcacc	cggcagttgt	cctgcgtgca	gcggtagtag	60
ctctggggat	gttgagtgtt	cttgaccacc	ttctgaccgt	acttctctca	tttgtaccaca	120
tcgtccagga	catccacatc	gctcatggtc	ttgaagcaaa	acctcggctc	cctcaccctc	180
ctcctcccc	ttatctctct	catcttcaag	gctgaaaccc	ccatgctctg	gtgggtgggtg	240
tgatcacgat	aatgatcgcc	atgatctcca	cccgccggatg	aggatctcat	gaccaagctg	300
ctctggctac	tcaactcacc	ccatgccca	agattcgggg	ttgatctttg	caaaagacaga	360
agctgggggg	ctcccaagag	ttcag				385

<210> 1532
 <211> 153

<212> DNA

<213> *Bucalyptus grandis*

<400> 1532

tcggggtcaa	tccatctggt	gcagaacata	aacgcctgtg	tgggtcccag	gcattttctg	60
cacaggtcca	cctaggagga	agaagaacat	ctactggtaa	ccttctccat	ttaccacagc	120
tatcacattg	aaccattg	tcttgttccc	ccc			153

<210> 1533

<211> 417

<212> DNA

<213> *Bucalyptus grandis*

<400> 1533

cagaaagtga	ctcgccctag	tgtaggagta	gggagaggct	tggatgcaca	ttccatttgc	60
cctccttgaa	gccctccaac	ggcgagata	tctccttgct	tttttaggca	aaatgttgaa	120
aaactggtga	taataaaaag	aagccctggt	tagctataaa	gggaagcccc	atcctttctc	180
ctcctttct	ctttcttacc	tgtccccc	tccctctccc	tggctctcgc	tctctctctc	240
tctctcagtt	ctttctcgga	cggtgtctgt	tgcgtggctt	tgtatcggtc	atcacctgag	300
gccgctctg	caagcaagtg	aagaaggagg	acaaggaata	tggcgagaga	gaagatcaag	360
atcaagaaga	tagacaatgt	gacggcgagg	caggtgacgt	ttctaagaag	gagacga	417

<210> 1534

<211> 574

<212> DNA

<213> *Bucalyptus grandis*

<400> 1534

gtccttgtga	cgacaagaat	cggggaata	cttcgccaat	cgcccttccc	atatattatc	60
aggcctagaa	gaaataacct	gtgtttctcc	tcgggtccaag	caatccccct	ccttctctcc	120
tgatccgacc	tcgagccttt	ccctccctgg	tttgactcgc	cgctaccgce	gcgcgccctc	180
ttcctgtctc	cctcctcccc	taagttactg	gcggagccat	ccgagcaagc	cgaactgtag	240
gacggcgag	gcacgcggcc	agcctctatc	ctattgacat	cttccaccag	gtcctcgtag	300
tggagcttaa	tctcctctag	ggttttgccc	ggcacgtcgg	acgctacett	ctcccccaa	360
tccggggaaa	cctcgaagtg	ggtagccagg	gcattctcga	acgcttctgc	ctgttctcta	420
ctccacgagg	aacaactagg	gtcactgctc	tcactcgacg	tcactcaagc	aaaaccaca	480
cacccttcca	actccgaagc	acttcacgcg	actcagcagc	gcgacccaat	gaaactcgac	540
ggcaaaatct	acggagctat	cgaaccaacc	ccaa			574

<210> 1535

<211> 497

<212> DNA

<213> *Bucalyptus grandis*

<400> 1535

accgacctcc	tctctccacg	cgccactgtg	cccgctcgcc	gaattcgccc	cgccgtcgta	60
ggagacgcga	tcctccgcgc	ccgcggcgat	ggccccagct	tcctccctcg	cgctagcaac	120
gcatttcaat	ggaagtatgc	tcaatgatac	taactcatct	ggtgaaagtc	acacacgtaa	180
tggaaaggcca	cgaggagatg	ccagggggaag	gaatcaatta	cttccctggt	actggcccag	240
gataacagat	caagagctac	aacaaatctc	aggagactgc	aactctgtaa	tactcctctc	300
gttttagaaa	atgttgatgc	ctagtgtatg	aggtaaaatt	ggacgttttag	tgtctgccaag	360
aaaatgtgcc	gaggcctatt	ttccgtctat	ttctcagctt	gaaggattgc	cactcaaaag	420
tcangatgcc	aaaggctcgg	agtgatattt	caatttcgat	tctggccaat	aataatagta	480
gaatgtatgt	tctgga					497

<210> 1536

<211> 454

<212> DNA

<213> *Bucalyptus grandis*

<400> 1536

gttcttctc	gtctccatga	cgcattccttc	ggcaacgaacg	gcagcttgcc	cgccagggcc	60
ctgtacgggt	cgaccccgct	ttgggtgtcg	ggcggggacc	gcctcgccga	ctcgcggtgc	120
gagaggcgga	acaggcgcg	attttcgggc	tcaacacccat	gggtctgcgtc	cccggtgatcg	180
gcggggctcgt	cgaattgggc	tccacggagc	cgatctacca	tagcccgat	ctgctgaaca	240
aggtcagga	tttgttcaat	ttcactgggtg	ggatgggaat	aggggttgggt	gggaatggta	300
acgatcagg	cgagagcgat	cctttctctcg	ctctggctca	atgatccggc	gggacggctc	360
gaggtcaaa	acagcgccgt	cgccggcgcg	cgccgctcaa	gggttctctcg	aattataacg	420
gtagcaatca	tgggtctaaa	tgcattcaac	tcca			454

<210> 1537

<211> 266

<212> DNA

<213> Pinus radiata

<400> 1537

catcaatggc	atcgctttttg	ttcccgagg	ctatgctgca	ctgccctgca	caatacacag	60
aagcaatgca	ccaaattctgc	agccacagg	aagggcgagg	tcaagaggat	tctgaggcaa	120
caggaggctg	cccttctgc	gccagaggag	gcaactttga	atcagcaaac	tccacggtag	180
agagcggtgc	gtcgtcgcaa	ctgggggaaa	tgggtgtctcg	aaattcgaga	accgaaaaag	240
aaaaccgcaa	tctgctcgg	ctcctt				266

<210> 1538

<211> 426

<212> DNA

<213> Pinus radiata

<400> 1538

gcattattcta	tatgaagttt	gtccttattt	caaatttgg	tatgtagctg	caaatgtgtc	60
catcgcgga	gcatttaaa	acaaagacag	gggtgcacatt	attgattttc	agatcgctca	120
aggtagccgc	tgggttaacat	taattcaagc	atttgcagca	agacaagggtg	gttcgctcca	180
tgctcgcatc	acaggtgtgtg	atgatcctca	atcagagtag	gctcgagggtc	aaggattaaa	240
tttagttggc	gaaagattat	caaagcttgc	agaaaagctac	caagtctcctt	tccaatttca	300
tgggtttgtc	gtttttgggt	ctgacgttca	tgctgagatg	cttaagattc	ggcctggggg	360
agctttggct	gttaattttc	ctttgcagct	ccatcatactg	cctgatgaga	gtgtgaatac	420
aagtaa						426

<210> 1539

<211> 447

<212> DNA

<213> Pinus radiata

<400> 1539

cgacggcggtg	gttttttacac	agtcctcgga	ctcttcttgc	tccgagctctt	cccaaccacg	60
gcggcgcaag	aaatacaaaa	aaaccctatg	caagaaaagcc	caagacggct	ctcagccacg	120
aagggtcagc	catgtgtctt	tacagaagac	tctctcagtg	agagccggac	ccttggggacc	180
gaagacgctc	tgtaatgctt	gtgggtgttag	gttcaaatcc	ggcagactcg	taccagagta	240
cgccggcgca	ataagcccca	ctttttttga	gcgaggttca	ctccaatagc	cacagaaaaa	300
tcctcgaaat	gagacgccc	aaagaagaag	aacaacagag	gccagagcta	acgtcccaga	360
cggtgtcaag	cggcgccaac	gagtcatttt	cagacaattc	tttaccgctc	gaagagtc	420
ttctagttaa	accacagcc	gtgaaat				447

<210> 1540

<211> 382

<212> DNA

<213> Pinus radiata

<400> 1540

gaggaatagg	gtgtcggaag	ttcgaattcc	caattccagt	ggcagaattt	gggtggggctc	60
ctacgacacc	ccggaaaaa	ctgcccgctg	atatgacttt	gcgctgtatt	gcctcagagg	120
gtccaagccc	aagttcaatt	ttccccactc	tcgcgcgaaa	ttttctcgct	cttcaattct	180
atcaccgcag	caaattcaaa	ccgcggcgcc	caagttcgcc	gcagaagaat	tccgcttctc	240

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ttccgaaatat ggcgcggcat cctcatcata tgggttggaa aaggnttatg acattaatag 300
cgaacagattg acttggaaagc aggggtgcgc atttggggat tcagtagcat ttgaaagat 360
ggagaatggc ggtactttca ac 382

<210> 1541
<211> 368
<212> DNA
<213> Pinus radiata

<400> 1541
ggtgattgga gaggaaatag cacggaattt tgtcataaca cgaacaccta caccaggtag 60
ccagccatgc ccagagaata ttttattcga cagagcaata tgactagaaa gaagagacgt 120
tcaggtctgt ttgacatgac gccggtgagt tttttcttcc tgtcttaaat tcttggtgtg 180
gtgggcattg aagggaattca ggaggcgtct tgggcaaaag tcccaaaaat tggatttgca 240
atcaatcatg attcataatt gttctgaaaa ttatgctaag aactaatctc atctttcaaa 300
ctcacaatgg tattcttttg tttgaagtgt ntctcaagtt tctttaatgt ctattcataa 360
tttcattt 382

<210> 1542
<211> 370
<212> DNA
<213> Pinus radiata

<400> 1542
caagcctaga gtagtattgt gcctaccagg cctctatca gcttcttctc tatcacaaat 60
tcttgcactt cacaagcaac caggcaatca aagaagcgtg ggacaatgct tctaattatc 120
atatcattga cctcgagatc agacaaggcc ttcagtggcc cagcttcata caatcgctag 180
cccaaggccc tggaggacct ccgaagctgc tcaagatcac agcgtatgga caagacgaga 240
agaggtctca acagacaggt aggcgtttgc ttgagtttgc agaataatg gagattgcat 300
ttgcttttca cccggttgtt gtggacttgg agaacttgg tgaatcggcc ctcaatataa 360
aagccacaga 370

<210> 1543
<211> 404
<212> DNA
<213> Pinus radiata

<400> 1543
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gcttcgtaac aaacgtggcg attgatccta ccttagcctg aaaatgctgt caggaggcta 120
gcgaaccaga tccgacacta ctactgtcaa caacggatcc gctaatggcc caataggaaag 180
tgctccccca agaattaaat cgatacaaaa taataatcca ggaactgtca ggctgggctg 240
gggaaccatg ccccttcaca tgaatcctta tcatcccaaa tcaatgctc ttcgcgcccc 300
caatggatgc cagggtcagc ttgtgtgcag tggatgtag actctcttct tttatccgca 360
aggtgcacca aatgtttgct gtgcagtatg caacacagtc actc 404

<210> 1544
<211> 339
<212> DNA
<213> Pinus radiata

<400> 1544
tatgtctctg catttcagcc agtccatggt ttcaagttag ttagtccaat aaagcagaga 60
tgggtcgtgc tccatgctgc acaaaagtgt gtctcaacaa gggagcatgg tctgccgaag 120
aggatagctc tctgggaaga tatattcaaa ctcatggtga aggaatttgg aggtctctgc 180
ccaagaaagc agggctgcga agatgtggaa agagctgcag atttgcgttg ctaaacatbc 240
ttcggccatg tatcaagcgg ggaatatatta caacagatga agaagaactt attatcagaa 300
tgcatgctct cttgggcaac cgatggtcga taatagcag 339

<210> 1545
<211> 395

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<212> DNA
<213> *Pinus radiata*

<400> 1545
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 gtatgattcc ttgctgctcc aaagaggggg tcaaccgcgg gccctggacc aaaagggagg 120
 atatgattct ctcgaataac gttcgaattc atggcgatgg tggatggaga aatcttccgg 180
 aaaaagcagg tccttaagaga tgtggaaaga gttgcagact acgctggttg aactatcttc 240
 gtccccgat taaacgcgga aacatttgcc ccgcccaggga ggagcttatt attcggctgc 300
 atcgctctct tggcaatcgg tggctactga tagcaggacg actgcctggt cgaacagaca 360
 acgaaatcaa gaactactgg aacactcatc tgagc 395

<210> 1546
 <211> 390
 <212> DNA
 <213> *Pinus radiata*

<400> 1546
 gttctgtcaa gaccagcaa gaattttggt cggggtttga aggtgggaga agtgaggtga 60
 ttccctcttt ggaagatgtg gaagggtcca caccacgat tggggggagg aagagaaaaa 120
 atgtttacag aggtatcaga cagcgtccat ggggaaaaatg ggctcggag attcggagatc 180
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 cctatgatgc agcgggtaaa aggatccgag gtaagaaaac taagctaaat ttgtgctgag 300
 actcgtgttc tgttaaaaaat gacactagca agaaattgtc agggaaaaga aggaaagttg 360
 tgctcaaaac accctgcctt tgttggttaga 390

<210> 1547
 <211> 447
 <212> DNA
 <213> *Pinus radiata*

<400> 1547
 aggggtcccc cgaaatgact gaagaggagc gggagacgaa gaaggccgcc agtggtggccg 60
 ccacggctgc cgaccaggag ctcaggaaga aagtgtgcg ggatctgcac gcgctgatta 120
 atcccaacgc gactggagag cgggatccgg cggagtttcc aggggatgat gctactgtag 180
 atggggaaat cacggacgcc gagtgggtttt acttggtgtc catgatgaag tcatlttgaa 240
 atggcttggg ggtgccggga caggcatttt gcggtggcat gcctatttgg atcattgggt 300
 cagaaaaagc tcagagctac aactgtgagc gggctcgta ggctcagcaa ttcggcatc 360
 aaaccatggt atgtattcca acactaatg gagtgtgtg tttgggttcc acggatttaa 420
 atcccgagaa ctgggatttg atacaga 447

<210> 1548
 <211> 357
 <212> DNA
 <213> *Pinus radiata*

<400> 1548
 cagaaatctt gtgattcctt tgattataat caaagggtcag ccttgcaagc aaccgtgaag 60
 ctgtgttcag ttcagagctt ctcttgcccg atggattcgg agcttatgat ggatgccatg 120
 cggaaacctt cgaataatgg attcgtact tcttccatgg aaatgttagc ggttatgccg 180
 gatcagatta ctgtcgaagc accacgggat tcgtcgagct tgttcggcgc accacgaat 240
 ggccgattgg cagggggagc gcgggcaagg ccgcatccga gtcaagtgtc caaatgccct 300
 cgctgcgatt cgctaaacac aaagtctctg tactacaaca actacaatct ctcgcag 357

<210> 1549
 <211> 395
 <212> DNA
 <213> *Pinus radiata*

<400> 1549
 gagactcaaa aatgggggaag acgaagatgg agattaaac cattcaaac cctagccggc 60

gccagggttac	ttttctcgaaa	cgcaagaacg	gatttgctaaa	aaaggcattc	gagctttctg	120
ttctctcgga	tgctggaatc	gccctgatca	ttttctcgga	aactggcgaag	atctgcgagc	180
ttgcaagcca	cgacgcacatg	gcaacaatac	tggaaaaata	tgcaatatac	acggaaacag	240
atggaacat	ggagtcgtcg	tcggtccaaa	gcgtgaaggt	ttgactagaa	tgagaatttg	300
aagtttaacc	cctgcaaat	ttatattgaa	gggaattcat	ggtccaaat	caagtcgcca	360
cccaagttaa	agtgcaatgt	aatcacttta	gcttg			395

<210> 1550

<211> 634

<212> DNA

<213> *Pinus radiata*

<400> 1550

gtccgctcga	ggtacgcaaa	gcacctacgc	agcggcattc	gaactctcta	cccatacgtc	60
agattttcaca	gtgacctctg	aatacaggta	agcgtgaagg	tgaattttga	caatggaggga	120
tcacggagggg	gacgacgcat	tcagagtgat	gtagtaggga	gacgcacatt	tcgtcgcagc	180
gagctctata	gactataccc	taatgatagg	aatggatatg	gtcccagggtc	ttccaggcct	240
attgagcttt	gtacaaactg	caagcgaaaca	gggcaactatg	cacgagagtg	tccaaatgct	300
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ttatgcaggaa	attgcaagaa	gcctggctcat	cttgcaagctg	attgcgcgaa	tgagctgttc	420
tgtaacatgt	gtggtaaaac	aggtcacatg	gcaaaaggat	gtttctgctca	tgagctagga	480
cttccaaaat	cagcactctg	caagaagtgc	tatttgccctg	ggcatattat	ggcagactgt	540
cctaatagata	aggcctcgaa	taattgtcgc	cagactggcc	acttggtctg	agattgtatg	600
aataagcccg	tttgcaatgg	ctgtggtgaa	cctg			634

<210> 1551

<211> 612

<212> DNA

<213> *Pinus radiata*

<400> 1551

agaacatggc	caagcacact	gtctcgcct	cttttctcaa	cgaaggagac	ttcatttgcc	60
ctccctacga	agatggaatt	ggtctagaat	ggctgtcgga	cttcgtggag	gattcctttg	120
cagctacagg	aagttcgaa	tctggttcct	tggtcgactt	gtctaaggac	aaaatcgacg	180
acaacaggga	gaagaagaag	cagaacccaa	ccgatgaagc	gataatccct	gaaataccgc	240
ctataaaggga	gaactcccagg	tcacagaggg	cgggtgcccg	gcgggctcgc	agcaagcggc	300
gcagaagctc	aggagcccca	attcgcgggt	ggctctactc	tgaagattac	gcattgcaga	360
atgagggcgg	catgaaaact	gtaacaggag	cggaacgctat	aaatcattac	cagtcctcgg	420
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gattggggccc	gttgggtccc	aagaccctgt	gcaatgcctg	cggtgtgagg	ttcaagtctg	540
gcaggctctt	cccgaataac	aggcctgcc	agagccccc	tttcattcga	tacattcatt	600
caaatcccca	ta					612

<210> 1552

<211> 562

<212> DNA

<213> *Pinus radiata*

<400> 1552

gtccatccata	ttttcttttt	cagtcgtcaa	tacaaattgt	tattcgagat	acgattgatc	60
attgcttgaag	gctatgccta	tgcttcggga	aacataccgt	gacagctttg	agacgacttc	120
gggaggtagc	agcgtggatc	tggtaggaa	ggctctacca	ggtttggccc	ctaatttgct	180
ttctgcttca	gtttcagctt	cagcgtcgga	agattctgcc	aagaaaaata	ggaaacccta	240
taccataacc	aagtcacagag	agagctggct	tgagcaagag	cacgataa	ttctcgaagc	300
ccttcaacta	tttgtcgtg	attggaaaaa	gatttgaagct	tttgtaggat	caaaagactgt	360
catcacagag	cggagctatg	cacaaaaagta	cttcttgaag	gtccaaaaaga	atggcacaag	420
agaaacatgta	ccacctctc	gtccaaaacg	caaagcatct	catccatacc	cacagaagggc	480
gtcaaaaaat	gttctgtgtg	cacagcaagt	atcaactgct	tttccaactg	ctgctactca	540
actagattct	ggattattat	ca				562

<210> 1553

<211> 392
 <212> DNA
 <213> Pinus radiata

<400> 1553
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 attttcttta atgcattgag cctcaatate ttctcttttg attgcacagt cgccaaaccc 120
 atgcttctat accttgagac taatgcacga gaaagagcaa catctctctc aaccgttgagg 180
 cgtggccctct gacggtaata acgaagaaat tcacgagaac caagcatctt gcatgttgtt 240
 ccattttcag actttctttg gattaccagt tcagcccttc caaagccaaag ttcaatattg 300
 acattgagat ttctctctgt gggcactatt tgcataccac ttcatccgt gtaactgctg 360
 ctgtagtcat aaaagtgcgc taaatcacta tc 392

<210> 1554
 <211> 570
 <212> DNA
 <213> Pinus radiata

<400> 1554
 tcgtttctca gcaaccggga gagcatggaa aggcgagatc agagtccggt tgcagctcgc 60
 caccctcatga gaaaacacta cagaggagtt cggcagaggc aatggggcaa atgggtagcc 120
 gagattcgcc tccttcagaa tcgaaccggg ctctggctcg gcacctttga caccgcagaa 180
 gcagcatctc tagcatatga ccgagctgct tacagatggc ggggtgagtg gctcgggtt 240
 aatttccccc attttgtctc aaaaaatgat cagaattcct ctccagctc caccaatggc 300
 aggatctctc gcctttcttg tgaaaaatct gatcagaaat atgcataaa tgggtgacca 360
 gttcatatga atgtatataa ggggtcccca attcggataa ctgcatacaa cggcgacca 420
 gttcctatag atgtatatag gaggaccaca gttcgggtaa gtgcataac tggtgacca 480
 gttcggataa gtgctatag tggtagacca gttggcaata ccgttacttt agcgggaatcc 540
 gagctgaaa gctcctgcag ccatgaatcc 570

<210> 1555
 <211> 392
 <212> DNA
 <213> Pinus radiata

<400> 1555
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 gagattgcgc tgtgagaagg gtaatacaaa caaaggggag tggaccacaa aagaagatgc 120
 ccgactcatc gcctacatcc gagcccaggc cgaaggcgag tggcatctcc ttcccagggc 180
 cgcaggtctg ctgcgatgtg ggaagagtgt caggctcgga tggataaatt acctgcgttc 240
 taatctgaag cgtggaaact tctctgaaga agaggacgat ctcataatca aactccacaa 300
 cctctggggc gataagtgtt ctcttatcgc gggctcgatt cggggccgga tgggaagacca 360
 gataaaggac tattgggata cccactttaa ga 392

<210> 1556
 <211> 364
 <212> DNA
 <213> Pinus radiata

<400> 1556
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 agttacacac caagaaaatc cacaatgggt agatctcctt gctgcgcaaa ggaagggtct 120
 aaccgcgggg cctggacgaa aacggaggat attattctct ccgaatacat tgaattctat 180
 ggctgtggtg ggtggagaag tctccccaaa aaagcagggc ttaagcgggt tggaaagagt 240
 ttagattac gttggttaaa ctatcttcgt cccgacatta aacgcggaga catttcccca 300
 gctgaggagg agctgattat tcggctgcac cgctctcttg gtaactcggt gtcgctgata 360
 gcag 364

<210> 1557
 <211> 355
 <212> DNA

<213> *Pinus radiata*

<400> 1557

ggagcacc	aaatgggg	gacgaagatg	gagatgaaac	acattcaaaa	ccctagccgc	60
cgccaagt	ctttctcgaa	acgcaagaac	ggattgctaa	aaaaggcatt	cgagctttct	120
gtttctgc	atgctgaagt	cgcccttacc	attttctcgg	aaactggcaa	gatcagcgag	180
tttgcaag	acaaagacat	ggcaacaata	ctggaaaaat	atcgcatata	cacgcaaaa	240
gaaacagatg	gaaacatggg	ggcttcgtcg	gtccaaaagc	tgaagggttg	tgaatcaca	300
ttgaaagcgt	tgacagagag	gatggacaat	ttgaaaaaaa	aggaacgaaa	catgg	355

<210> 1558

<211> 478

<212> DNA

<213> *Pinus radiata*

<400> 1558

aaaaagctgt	aaaacgggtat	atatagagcg	ctctccagtc	taacatcttg	gattgattgt	60
ttttctgttag	aaattcccat	catccctctg	tgtcttcctc	cttttgaatc	cagagactgt	120
ttttatgggt	gctgtaaatg	ctgaataaat	gcccaaatc	gaaggggaagt	ctgcgaaatc	180
cctggattca	acattcaagc	tggtcggcag	aacgattgtc	gtgaaaaatc	ctctgtgatg	240
cagcagcaat	ggatttcatg	tcgatgggat	tccagctgaa	gcagtgaaat	cagcagctcc	300
caaggcttct	gaaacgcatc	atcatgatga	gaaacagaag	cagaatgagg	attcagaaaa	360
gggtgggtaaa	aagcccaaaa	agcttgtgcc	ctgcctctgc	tcgagagaga	tggaataccaa	420
attttctcat	ttcaataact	ataatgtcaa	ccagcctcgg	cattatttga	ggagatgc	478

<210> 1559

<211> 389

<212> DNA

<213> *Pinus radiata*

<400> 1559

agaaggttgg	aatggcttag	tccgctcatt	tgatggcgaa	cagatctttg	tggggagggt	60
cagactttga	ttatgagaac	gaagccgata	cgaggaaagg	tcacatggat	gtggaaagagg	120
acatgcagct	tggtatttga	aatttgcacg	gagaaggacg	ctggaaactt	ctcgccagag	180
catctggcct	ccagagaact	ggtaagagct	gccggctaa	gtgggttaac	tatctccggc	240
ctgatctcaa	gcggagcaag	atcaactcct	aagaagaacg	tttgattatt	gaactccatc	300
gccgttgggg	aaataggtgg	tctcgtattg	cacaaagttt	accgggaagg	acggacaatg	360
aaatcaagaa	tttctggaga	actcgtatg				389

<210> 1560

<211> 354

<212> DNA

<213> *Pinus radiata*

<400> 1560

agatgcctcg	ggtagcagtt	tacaagagcc	tgaggagaat	gatgaagaac	ttgctcaagc	60
tcttgaagca	agtttgaaaa	tggttccaca	gcaaaatcct	cccagtcagc	ctccatcata	120
ctcttaacct	agaggatata	ggatctgtgc	tggttgcaat	catgagatag	gctatggggc	180
gtttttaaagt	tgatttgggga	ccttatggca	tcagatttgt	ttttgtgtgt	ttgcatgtag	240
tctaccata	cgtgaacacg	agttttccat	gtcagggaa	gatccatacc	acaaatcctg	300
ttacaaggaa	ctccaccatc	caaaatgtga	cgtttgcac	cagtttatcc	ctac	354

<210> 1561

<211> 248

<212> DNA

<213> *Pinus radiata*

<400> 1561

gccaggtgag	gcattggcag	tcaattttgc	attccagctg	catcacatgc	ctgatgagag	60
tgctcttacc	aggaacccca	gggatacaat	tttgagaatg	gtaaaaagcc	tgagtcttaa	120
agttgttaaca	gttgtgtgaaa	gggaaatgaa	cactaataact	gctcctttcc	tcctcctgggt	180

catggaggca ctgaattact actcagctgt gtttgaatcc ttggatgtta gcctcgaaag 240
ggaaaacc 248

<210> 1562
<211> 346
<212> DNA
<213> Pinus radiata

<400> 1562
tctgtaagtgt cttgagggtgt tcttgtatcgt atgaggccat taacgatggg aagatctttt 60
agtgtgttga gctgtttcaaa agataaatggt cagcagcgct ttaatcgtgg atcttggagt 120
gctgaggagg atacaattttt gagtgaacct atcaaaactc atggagtgtg tctgatggaca 180
tctcttccca agaagcagg tctaaaacga tctgggaaga gttgcagatt acgttgggtt 240
aactatcttc gttcagatat caagcatgga aacatttctc cggaagaaga ggaactcctc 300
atcagattac atctgtctct tggcaatcgt tggtcgttga tagcag 346

<210> 1563
<211> 354
<212> DNA
<213> Pinus radiata

<400> 1563
gtttggggat atatcagaat gcaggacact gctgcttcca catctacaca gcactagtc 60
acaagtgtgaa aatcttcaag ttccagcagct ccagcccatc ttagacaagc caaagatgca 120
attgagagag atgatgatat caggagggtt cctgaaatgg gaggaatgca agcaggtcca 180
tctcatgtgt tgcctatgag gttagacaat ccccaacctc gcacaggcgt tgttgcccaac 240
aggaagagag ggagagcccc tgcagacaag gaacacaagc gtctcaaaag attgctatgg 300
aacagagtat ctgccaaca ggaagagaa agaaagaaag catacttaaa tgat 354

<210> 1564
<211> 324
<212> DNA
<213> Pinus radiata

<400> 1564
tagctgcgca gtgtacgaat gagaaggcat gcaacaactc tgcgaagacc gggcatcttg 60
ctcgtgactg caccacaac ccagtttgta atttgtgcaa tatatctggt catgtggcca 120
gggagtgccc caaggctcgc attttggatg gtaaatgggg tggaaagattt attgacgata 180
ggcgtggaag atttaatgac ataactctgta ggacatgcaa cgagccaggg cataccagta 240
gggagtgcac tggaaatttc atctgcacaa acttgtgggtg gccgtggaca tgttgcatatc 300
gaatgcccc tctgctcgtg tgat 324

<210> 1565
<211> 421
<212> DNA
<213> Pinus radiata

<400> 1565
aacggaacaa ggaccggact ctggctgctg cctccctca ttaaccattc ctgtctgccg 60
aactcgaggt ggctgttagt gggaaatgcc atttttatac atgcctccaa ggcctatcgg 120
agtgagagaag agatcactat tcttattttt gatgttctgg ctcccttggt acggcgccaa 180
gctgactgta agaactgggg ttccaagtgc aagtgttaaga gatgcattct ggagcactca 240
ttcaggaaat tcttagaacc tataattgcc ctaagtttgg agcaattgga tgaccagaac 300
aaagaattgc tctgctggatt ggatcatcgg gaaagtgcag aaatgagtca ccgggaaat 360
gcagaatttg caatgtttgt tccagaggca gaggagatca tccggagtgc ccatgtgttg 420
a 421

<210> 1566
<211> 390
<212> DNA
<213> Pinus radiata

<400> 1566

cttaattccg	caacacaatg	cgttttcatt	ggagttgaga	ttttcagatc	ggcaattgcc	60
aagctcaacg	cccccaattt	gtgatttcgat	gtttccctcc	cactacacag	cgttggcatt	120
gcgtcgccaa	atgtggagaa	acccagagaa	gtccggacag	agccattccc	agcctccaga	180
gaagataga	ggaaaaactt	tcggccaatt	taagggaaatc	cgaatgcgaa	aatggggaaa	240
gtgggtgtcc	gaaattcgga	tgccgagatc	gaaggagagg	atctggctag	gatcctataa	300
aactgtcgag	caagccgccc	gtgcttacga	tcgccgactc	tattgcctca	gaggacccaa	360
cgccaaattc	aatttcccga	attccgtgcc				390

<210> 1567

<211> 353

<212> DNA

<213> Pinus radiata

<400> 1567

gtctagggga	aaagctttga	aattatttgg	gtttgagttt	agagggtcag	aaggtggatc	60
atttgaaagg	actaatgggt	ctgatcagcc	acaagatggg	actaatatat	taactgcagg	120
tgaagcatcc	actgagccag	tgaggagaag	actagtgtat	gaggccaaaa	atggagattc	180
aggaaaattt	gaagatgtgg	gtagtccagt	agaggctgga	gaaagtggta	gcactagcaa	240
ttgctgggga	tcatctgtct	aagaaaaatc	gaaatatgaa	tgcaaatact	gttcagagaga	300
gtttgcaaat	tcgcaggctc	tcggggggcca	tcaaaatgag	caaaaaaag	aga	353

<210> 1568

<211> 436

<212> DNA

<213> Pinus radiata

<400> 1568

agtattgaaa	ttccccctgtt	ttgatctgat	agctatggat	ctgatggagt	cttttgaggc	60
aaaggggaaag	ggagagaaga	ggagaacggt	gaggggaaaa	accagttga	agaggattga	120
gaacgggaac	agcaggcagg	ttactttttg	taagccgagg	aacggtctgc	tgaagaaaagc	180
ttacgagctc	tcgggtgcttt	gtgatgccga	agtggcaact	attgttttct	ctccaagagg	240
gaagcgctat	gagttcgcta	atcccagcat	gcagaaaaatg	ttggcacggt	acgaaaaattt	300
ttcagaagga	agtaaaagcaa	cgagtacagc	aaaagagcaa	gatgtccagg	gttttaaaagc	360
acaaattgag	aatatgggaag	aaaggggtga	aattcttgaa	tcatgcata	gaaagatggt	420
gggggatagc	tggcat					436

<210> 1569

<211> 349

<212> DNA

<213> Pinus radiata

<400> 1569

gttcaatttt	ttcaatttga	gtggaaatag	aagcctgcag	gtacctctag	gctaccggag	60
ttcaaatccc	gcacgatcac	actcccttct	tttaacattc	cgagttcgaa	tcgccggaaa	120
cttctcgaca	tgggttaagcc	ctcgcaaaaa	cagaataatc	atgtcaatgg	caagccggaa	180
agccgcctac	tgatgtcgcg	gcaatttcaa	ggaatccggc	taagggaaatg	gggaaaatgg	240
gtgtccgaaa	ttcgaatgcc	caattgcagg	gcacaaatct	ggctgggctc	ctacgaatcc	300
ccagagaaaag	ctgcccgcgc	ctatgaattt	gcagcgtatt	gtctgagag		349

<210> 1570

<211> 580

<212> DNA

<213> Pinus radiata

<400> 1570

agagagagaa	cgtgggagaa	aacctgcaaa	tggccgtgaa	gaacctctga	atcatgttga	60
ggctgagcgg	caaagcgctg	agaaattgaa	ccagaaattt	tatgagcttc	gtgccgtggt	120
tcctaattgta	tcgaaaaatg	acaaagcttc	tctgctcgcc	gatgctgctg	cttatataca	180
agatctcttt	tcacaaacagc	aggatttggga	gtccgagagg	gttgatagtc	aggttcaaat	240

tgacactata	aagaaggaat	tattgatgaa	ttctttgaag	ttggcagcta	aagaagcaaa	300
agatctttta	agcattgacc	ttaaagggtt	tagccagggg	aaattccccc	gcttgaattc	360
agaagtctgc	attgttggcc	gagaggcgat	aataagaatt	cagtgactac	aacataatca	420
tcctgttgcg	agactgatga	tagcactgca	agaacttgat	ttggaagtcc	tccatgcaag	480
tattctactc	gtgaaggatt	cttaatttat	ccagacagtc	attgttataa	tgaccagagg	540
tttgtacacg	gaagaccaac	ttcacgcccc	gctttgttaag			580

<210> 1571
 <211> 469
 <212> DNA
 <213> Pinus radiata

<400> 1571						
gttgacggag	caggcagagc	gcattgggtc	cgtcaagatt	ggcagcaacg	gtttgttgtc	60
gttggcgacg	cggttaaagg	tgccagcatt	tgacctggaa	acacatggga	tttttttcag	120
agtggaagaa	gaagcagatg	atgagattat	cgttgaatct	gtagatgtta	acggggacag	180
gggttttggt	gcgtcaaatg	acggtaatgc	taggggtcgt	cgatagagga	cactcgaaaa	240
catatgcacc	ttaccgtttg	acgggtttag	cgagcgagat	gataacagta	gcggtagtta	300
taacaataac	aatagtagaa	aaattcttgg	gactttgaat	acatggctgg	catttgtctg	360
cattgcagg	gtgggtgcac	cttgggacgc	tgacagcgcc	gcacgactct	accgtttggg	420
agaacaagtc	ggcgatgtgt	tcgattttgt	atcagacaa	gaacacgtg		469

<210> 1572
 <211> 337
 <212> DNA
 <213> Pinus radiata

<400> 1572						
gggaggcaga	gaaggaacgg	aaaaaggagt	gaatttttgt	gggtttgtgt	ttattgggaa	60
gatgggggtg	gtgtcgtcca	aggtggagaa	tgaagaatta	gtgaaaagat	gcaggggacag	120
gaggagggcta	atgaagcagg	cagtgaaattc	caggccacaat	tttgctgcag	ccacacttgc	180
ttatttgagg	gctctgcmaa	acacagggaa	tgctctggtg	caatttgcgg	agggggaaatc	240
cagtgctatg	aatggcgaat	ctattgaaga	agcggccaca	ccaatgccag	cgaccccat	300
aacagcatct	catcgccatc	ccatgaaatt	ccatcct			337

<210> 1573
 <211> 341
 <212> DNA
 <213> Pinus radiata

<400> 1573						
gttctatact	gtcacgggtg	ttcttttaat	ggctcgttcc	tcctcccctca	ccatggagaa	60
gaatatgtac	tgtagtctca	ctattctgga	gtatgacact	gaggaaaggga	gtagttttaga	120
ttgggaatgc	gacatgtccg	aggaagaaga	agatcttata	atcagaatgt	acaaacttat	180
cggcaacaag	tggtcgctga	cttctcgtga	agaaaaggag	aggagattga		240
gagggtactg	gccatgagaa	cccaacaatt	gtgcggcgcc	gatgatgcta	ttttgacgaa	300
gaaacagcag	aaaaccata	tgatatcgat	taagtaccgc	g		341

<210> 1574
 <211> 479
 <212> DNA
 <213> Pinus radiata

<400> 1574						
catatcattc	atatgaatat	ggatagcagg	caatcagggg	aagaggaaga	ctgcaacgct	60
actcggccag	gaggaggagg	aggaatatca	ttacatgtta	gcagcgtgga	atatgtccag	120
aagagtgtct	gtgttgccca	tgatatctct	tctgatgaac	aagatctgat	aaatagactt	180
cacaatcttc	tgggcgacag	gtgggcactg	attgoggggc	gccttccatg	gagaagaaga	240
gaggagattg	agaattactg	taaaatgaga	tacacagcca	ctacctcttc	ttcacgctct	300
tgaatctccc	tttctctcgc	cagggttatg	agtggtggac	aactatcgta	atcagatagt	360
ttgggttgat	tcagattgtt	taggtttatc	tcacttgtaa	aatatgtgtg	gatatttgtt	420

tgtttgtttt atcaaaacca agtatagaag aaataaaatt tgatcggttt atcgattta 479

<210> 1575
<211> 402
<212> DNA
<213> *Pinus radiata*

<400> 1575
attgatggga tcaccacctg gaggaggact tggctcttcc cctagaatgg gtggagggat 60
tgggaatggc ctcaaggagg attgggggtg ggcttggcgg gtctcggagc tactgcgctt 120
accattggag cagcatctcc cgccaaccag cttctctctg atggtatggg caacagccat 180
ggagacaact caacagtatc gccaaatcct tatgggttgg acgtaagtgt aagaggcagg 240
aaaagggtg gaccgggtga gaaagtattt gaaagaaggc agagacgtat gataaagaat 300
agagaatcgg cagcaagggtc gcgagctaga aaacaggcat ataccggtg aattgggaagc 360
ttgaagtac cagacctcaa agaagagaac aaggaattgc ga 402

<210> 1576
<211> 355
<212> DNA
<213> *Pinus radiata*

<400> 1576
cttcagccgc ttggagtcca cttcccagct gctacatccg ttgtctccca gcgcactgct 60
gccatcgtgg gagaagccgt cgtctgctccg cttgcgagcg gcgtctaaagc tgctgatcttc 120
gtcgtccagg tggacaacga tgcccttttc ggggtccccg cagcgccctcc gtatgcgtga 180
gttccagtgg ttcttgatcg cgttgtcggt gcggccgggg agggctcggg caattgtgtc 240
ccatttgttg ccgtgctgcg cgtgggcctg cagaatagca gcactcctcg acggggtaaa 300
aggctctgctg tccacctgag ggctcagctg attgcaccac cgtagcctgc acgat 355

<210> 1577
<211> 463
<212> DNA
<213> *Pinus radiata*

<400> 1577
gtgaaacttg agcaatttaa cttgattctg tggagactga tgctgatgag aaaattgagg 60
acaagggagg aagcttgaaa atgactcgcc accagaaacg caaaattgat gaaatccacg 120
ttgaagaggg tcagggtcat gaggattttg atcctgctag ccttcgagag catgaggagt 180
ttacgaaagt taagaacata gcaaaggtag agcttgggag gtatgagatt gagacgtggt 240
acttttcacc tttccctcct gaatacagcc attgtgagaa gttattcttt tgcgaatttt 300
gtctcaattt catgaagagg aaagaacagc ttcaagagca tatgaggaag tgtgatctga 360
agcatccacc tggagatgaa atatatcgca atggaaacct cctcatgttt gaggttgatg 420
gaaagaagaa caagatatat gggcagaacc tctgctatct gcc 463

<210> 1578
<211> 343
<212> DNA
<213> *Pinus radiata*

<400> 1578
gaaacaccaa ggttgggath tctagaacga agcatacagc aacagcgcgc atttcaccac 60
ttaggattga tggagcagca cccttggcga ccgagagag gacttctcga acgctctgtn 120
tctgttcttc gtgcatggtt gtttgagcat ttctgcacc cgtatccaac tgatgcagat 180
aagcatatat tggctaagca aactggcctt acaagaagtc aggtatacaa ttggtttata 240
aatgccacgg tttagactatg gaagcccatt gtggaggaga tgtacatgga agaactcaag 300
gaagaaaaag tggaccaaagg tacacacaaat tctgaagctg aaa 343

<210> 1579
<211> 530
<212> DNA
<213> *Pinus radiata*

<400> 1579

cggaagctgg	ggaggtccgg	acaatttgta	tggagctcag	gaagacagtg	gtggaagtag	60
tgttaaacag	aagaacttga	aggatgggga	ccaattccac	agtagtgatg	aagctgcacag	120
tgaggtcaat	gaattcaaca	tatgaaaag	aagcaattca	ggggttgat	atgaagataa	180
caaaagaagt	ggggggcaag	gtgatggcaa	tcagtcacag	tcacgtcact	ctcggagcat	240
ctccatggat	agcattatga	gtaagatgca	taacttcagt	gaagacttgg	aacaggaacc	300
gtctcaaggt	cgaatgtca	gacactccca	tagcaattcg	atggatggaa	gtacaaattt	360
caatgtggaa	ttcgggaatt	gggaattcag	tgcatctgag	atgaagaaga	tcattggccag	420
tgagaaactg	gcagagcttg	caacggtgga	tccaaaacgt	gtcaaaaagg	atattggcta	480
atcgccagtc	ggctgcacgc	tccaaggaaa	gaaagatgag	ctatatctca		530

<210> 1580

<211> 561

<212> DNA

<213> Pinus radiata

<400> 1580

ctccactaac	tccttcattt	caacactcac	agcatcggtg	ccgtgcgata	aaacttctat	60
actgggttcca	tctctcagcc	caacagccgt	agggcgaccg	ccattatcgt	cctctaagaa	120
agcttgcac	catggaatac	ctgacgatct	ctcaggaaaag	tgttaacacta	caggccgacg	180
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agtcaagtga	aaattggcgg	acattccatc	tgatgaattc	tcattggcgaa	aatatggaca	300
gaagcccat	aagggtcttc	cacatccaag	aggctattac	aaatgcagca	cagtgagagg	360
ttgcccctgca	agaaagcacg	tagaaacgag	cctggacgat	ccaaacgtat	tgattgtaac	420
atatgagggc	gaacacagcc	attctctatc	tgagcttgaa	aacacagacc	tggtactgga	480
ttcgtgagac	ccacatacag	acaaagacat	tattctagtt	tatatattacg	ctacagaatc	540
cgccattatt	acagcgggat	g				561

<210> 1581

<211> 357

<212> DNA

<213> Pinus radiata

<400> 1581

cccgaacagg	cataagcact	gacaaaggat	tttaagatct	gtgcgatgtg	ggatatggat	60
ttgccttccc	aagggtcaag	tttgagtcca	tctggttcag	tttgactat	acaacagaac	120
aaaatttttcc	aaaatgactc	agctgatttt	gataaagaca	ccccagataa	atgggagaaa	180
gtggcagcca	ggctgctcgg	aaaaactcgt	acggatgtta	gaaagcatca	tgaagatctc	240
gtggaagatg	ttactttgat	tgaagctgcc	gcgttgccct	accacagtac	agtaactctt	300
cctgttcaca	tgaattggtta	gaaaaatcag	gcgctatgca	cggattggaag	caacaat	357

<210> 1582

<211> 522

<212> DNA

<213> Pinus radiata

<400> 1582

gcgagctagg	cggtagctaa	cgaggagaga	gatttatttt	cttgtgtttc	agagtttttg	60
cagtgctgct	aaatggcgtg	agaaaccatg	cggatgtcga	gggtgagact	aggaagtgtc	120
gaggagccct	cccggccgtg	caagaaacc	catttcaggg	gcgtgcgaaa	acggccgtgg	180
gggagattcg	cagcggaaat	cagagatcca	tggaaagaag	ctcagtggtg	gctgggcaca	240
ttcgacactg	ccgaggaagc	cgcccgtgct	tacgatactg	ccgcagagag	attgcgcggc	300
cacaaagcta	agaccaattt	tctctgcacc	gccgactacc	acaataacgc	tggtgcgcgc	360
gcactttctc	ggaactcaggc	gctgcactct	cagcagccgg	atctgaacgc	cgcggctttt	420
gctttcgtat	caaaccaagag	acgtggaagt	tctctgtgaa	gcgacccggt	cgagttcgaa	480
tctcccaaca	attctctcca	cgctgcacct	ctgagcaggc	gg		522

<210> 1583

<211> 530

<212> DNA

<213> *Pinus radiata*

<400> 1583

ggcaggaggtt	cccgcaagct	ttaagaaccc	ttccctttgt	gttagacctc	cagggttctct	60
aggtacgcag	tctctacatc	gcgtgacgtt	caagggagac	gggataattc	gagtcgcgac	120
gcgcgcattg	cgttagacac	catcacagatg	gcgagagtg	gtgtaaaaat	gaagatcgga	180
ggaggcgctc	gcgaggaaga	ggcgtctctg	gctgtgaagg	aaacgcattt	cagaggagtg	240
aggaaaaagg	cgtggggagg	attcgctgcc	gagatcacag	atcccttgaa	gaaaaccaga	300
gtctggctgg	gcacttttga	cactgcagag	gaggccgccc	gagcctacga	taacgctgcc	360
agaaatcttc	gcggggccaa	ggcgaaaact	aattttcttc	tgctccccca	caatgacatt	420
agcaccagg	gcagcagcag	cgccgcccgt	tcgagcaata	gcaccaccag	cgccgcctct	480
ggtcacaaatc	aaaaccaatg	gcccttgcgg	ccatatttct	attcgaatca		530

<210> 1584

<211> 435

<212> DNA

<213> *Pinus radiata*

<400> 1584

gcattgtctc	gctcgaacac	atagtagtct	gatctctgcg	cttcgagcac	tacgagaatt	60
ggttcaccat	taccttcatc	atccaccaat	ggcggccgaa	gatttttaatg	acaagaatgc	120
tgatttcaga	aagctccggg	ccaaaccgga	tgctttgact	gtaatacaag		180
gaatccaca	tgggcatcgg	tcacttacgg	gattttcatc	tgccctggatt	gttctgcac	240
tcattctagt	cttggtgttc	acattagctt	tgctcagatc	gtaaacctgg	actcatggac	300
tcttgaaacg	ttgaagggtca	tgagctttgg	tggaatggc	cgaggacata	cattctttaa	360
gcagcatggt	tggaaatgatg	gagggtaaaat	agaatcgaaa	tacacatcaa	gagcagctga	420
gctatataga	cagct					435

<210> 1585

<211> 362

<212> DNA

<213> *Pinus radiata*

<400> 1585

gaagacttg	cagcttacat	ggtggagggt	cttgctgcac	gaatagcatc	ttcaggaaac	60
ggaatatata	aagctttgaa	ttgtaaaagg	ccacaaagca	ctgatacttt	atctgccatg	120
caaatattat	ttgaagtttg	cccatatttc	aaattttggt	gcattggtggc	caatggttga	180
atttgtgaag	ccctcaagga	tgagcagaag	gttcatatac	tagattttga	aattggggcag	240
ggaagtcaat	acataagcct	cttaaatgtc	cttgacagaaa	ggcctggttg	gcctccacat	300
ttgcgcataa	ctgcagtaga	tgatttctgaa	gatgtaagat	atattcctcg	gggattggat	360
aa						362

<210> 1586

<211> 362

<212> DNA

<213> *Pinus radiata*

<400> 1586

caggagccga	aaagacaac	tacgaacaaa	atccctgtcc	aaataacaag	aaaaatggca	60
gagtcacagg	ggctgctctac	acattacaaa	ccgtacaggg	agaagcagac	tctctcaggc	120
caccgtggag	cggtctcgtg	cgtgaaattc	tcaaaaggacg	ggcgtctcct	gggcagcgct	180
tctctggaca	aaaacaatatg	catatggctg	gcctctgctt	cttctctcac	ctctgcattc	240
aagcggggag	tccacggcca	cagcgagggc	gtctccgact	tcgctgggtc	gtccgactcc	300
cgtatatctc	gctcggttga	tgacgacaag	agcctccgca	tctgggacgt	ccacaagggc	360
ga						362

<210> 1587

<211> 389

<212> DNA

<213> *Pinus radiata*

<400> 1587
 cttcgggtctg cctgggtgcg tttctgaatt tctcgccaa gtagtgagtc gatccagcct 60
 tgtttcagcg aaacctgtgt tgggtttggg ttttcttgge ttttgccttt tcattctttg 120
 tttctcttga ttcgaaactcg agatctcctg aatattatgg cacaggagag ctggaaccag 180
 gaggagaccg ggtgcacaagt cccgggaagg ctcatgctgc gtgcacaa caa ctgtggcttc 240
 ttccggaagtc cggcaccatc gagtctctgc tccaagtgt accgcgaatt cgtgctgctc 300
 aactccccta aatcgtcctt cgataagcgc caacagcagc tgcgtagtca ggacgaggta 360
 tctatcccg gaccgcagct tgcgtctga 389

<210> 1588

<211> 416

<212> DNA

<213> Pinus radiata

<400> 1588
 cagcaatggc ggcccagact atcatcgctg cctctatggc atctcctcta acattatcaa 60
 atggccacta tccggttttag tccgagttca aggggtccgt gggttcgaatc ccgcagaggg 120
 cattttcctt cgcgccttgc gcccgggcgc tgacgtcgt cgcataggcc aagaaggccg 180
 ttgcccgcct caaagggaat tcacaggtcg aggggtgtgt cagtctctcg cagggaagaca 240
 ggggtccac aacagtgaa gtcggtttga caggactgac tctggggaag catggctttc 300
 atctacatga gtttggtgac acaaccaatg gctgcatatc aacaggagca cattttaatc 360
 caaaaaaatt gacacatggt gtcctgagg atgatgtacg ccattgcccgt gacctg 416

<210> 1589

<211> 507

<212> DNA

<213> Pinus radiata

<400> 1589
 tgcgagtc aa tgttttaatg atcccatttg tcacacatgc ggcaaatctg gtcacctctc 60
 cagggtattgt acggctccag agcttcccc tggagacatt aggccttgca acaattgtta 120
 caaacaagg caatagatcg cagagtgtac gaatgagaag gcattgcaaca actgtcgcaa 180
 gaccgggcat ctgtctcgtg actgcacca caaccagtt tgaattttgt gcaatatatc 240
 tggctcatgtg gccagggaag gccccaaggc tcgcattttg gatggtaata ggggtggaag 300
 atttattgac gataggcggt gaagatttaa tgacaatac ttagaggcat gcaacagacc 360
 agggcatacc agtagggagt gcaactggaat tctcatctgc cacaactgtg gtggcgctgg 420
 acatgtttga tacgaatgcc cctctggtcg tgtgatgctg cgggacatgc gcaggcattg 480
 atgctgcagt ttctacacca cctgact 507

<210> 1590

<211> 370

<212> DNA

<213> Pinus radiata

<400> 1590
 cgatatttta tgtgttgaa gttggcaaaa ggagcatttg tcttaaaagg tcaaccctgt 60
 aaggctcctga tcaacccttt gacaagataa aaatggacag aaattcagaa tttatgaag 120
 agacatcgtc acagaaaaat caggatcccg gatcaagtga tggaggtagt tttgatgca 180
 atatttctgt agaattgacc caagatcctg tggtagctca atgtggctat cttttttgtt 240
 ggctctgcct ataccaatgg ctacagatgc actccatctc aaaagaatgc cctgtttgca 300
 agggcggtgt agtgaagag aaggtaattc ttttatatg gaggggtaag gtgggtttctg 360
 ctgatccaag 370

<210> 1591

<211> 308

<212> DNA

<213> Pinus radiata

<400> 1591
 gttccaggga gaggagacc tcagctgtct cgatctggcg ttaaggggtt acagaagaag 60
 aatttcgaag atggttagat cttcttgcta ttcaggcaa ggtcataggc gtgggatttg 120

gacccctatg	gaggatatga	ttctctctga	atacattcga	attcatggca	gtgatggatg	180
gaaaaatatc	gctaaacgag	caggctctta	acgatgtgga	aagagttgca	gattacgttg	240
gttgaactat	cttcgccccc	acattaaacg	tggtaacatt	tctcctgatg	aggaggacct	300
cattatta						308

<210> 1592

<211> 361

<212> DNA

<213> *Pinus radiata*

<400> 1592

ggatattctg	gtgtgcattg	ctattctggc	catgaatttt	ggcagaatgt	gcgattaggg	60
tttgattctg	gggtgtcttt	tcaggtagac	cagagatttg	aaggggattt	gaatttgaat	120
cttgaaggtt	gagtgctgca	gccttcggct	ttccgctcag	gggtgtgagg	ttgacatgaa	180
gccaacgatg	gtggtggaag	atacgcctaa	tcaaggatgc	atgcaatatg	gatgttcaca	240
ctaccgcggg	agatgccaaa	taagggtccc	gtgtgtgaat	gaagtctttg	actgtaggca	300
ttgtcataat	gaggccaaaa	attcaatgga	tgtccatcca	cttgacagac	atgatgtacc	360
g						361

<210> 1593

<211> 378

<212> DNA

<213> *Pinus radiata*

<400> 1593

accgaagctca	tcacatggcg	tccgagaagg	aagctgctct	tgctgccaca	ccaccagaag	60
atgataaaac	tacaatat	gacaaaatc	tcgagaagga	gattcccgag	acagtgtgtt	120
acgagatgga	gaaggtactt	gcattcaggg	atatcgacc	ccaagccact	actcacatca	180
ttatcatccc	caaaagtaagg	gatggcttga	ctggcctatc	tnaggcagaa	gagaggcatg	240
aggatattct	aggtcacctg	ctatacactg	caaaagttaa	tgcaaagcag	gaaggtttat	300
ctgatggctt	cagaattgtc	attaacgatg	gtcctaactg	atgccaatct	gtgtaccatt	360
tacatatcca	tctactcg					378

<210> 1594

<211> 333

<212> DNA

<213> *Pinus radiata*

<400> 1594

gattgacgga	tcgattgcaa	tggcggttgc	ggaagagtat	tcgatccgag	atgccgtatt	60
tcgaaagctg	aaggccgaagt	ctgaaaacaa	gatttgtttt	gattgcaatg	ctaaaagtcc	120
cagttggcgc	tcctgtacat	atggagtatt	catttgtctt	gattgttcag	caatgcacg	180
gagttcttgg	gttcattgca	gttttctgag	gtctacaaat	ctcgatacat	ggaccatgga	240
gcagttgaaa	ttgatgatct	ttggtggtaa	tggccgtgca	caattattct	taaagcaaca	300
tggttggaact	gaagggtgga	agattgaaac	aaa			333

<210> 1595

<211> 356

<212> DNA

<213> *Pinus radiata*

<400> 1595

ccttaacggt	gtctatgtgt	tgatatatat	cacaagtgc	gtctatcgcc	tccttcgggt	60
cctgggggtc	cgagagtgtg	tggaaaccga	gacctcctgg	ccagatgaaa	tcaaacccag	120
gttgaaagcc	gtgacatttt	ccgtatctgc	gcagaggatt	cgtgagcgat	taccagtagt	180
tcggttcggc	gttttagcgg	aggaggccgg	tgatgaggat	gttatgtgag	ctgtttgctt	240
aaataacatg	cagaggcatg	aggagatccg	aaggctaacc	aattgcccgc	acatcttcca	300
cagagactgt	atggacaaat	gggttgatca	tgacacagaa	gcctgtcttc	tgctga	356

<210> 1596

<211> 378

<212> DNA

<213> *Pinus radiata*

<400> 1596

gtcaacgaga	attgccacga	tgggttaatt	tggatttagg	tctgggaagc	tttaggataa	60
gttaattgtac	cgaagtgtgg	ttaatttttag	ttaaaggagat	tgtgttttat	catgctggatc	120
cagtgcgagtc	cctgcgagca	ggcagctgct	tcaagtgtat	gttgtgcaga	cnaggtctgct	180
ttgtgcaggag	agtggtgat	aaaagtcac	aaggcccaaca	agcttgccag	caaacacaga	240
agattgcttc	ttgtcggaac	ttcccaaaag	ctctctcgct	gcgacatttg	ccaggatagg	300
gcagccatcg	ttttctgtct	cgaagatcgt	gctatgctgt	gccaagaactg	cgatgagtc	360
gttcattctc	gcgacaca					378

<210> 1597

<211> 387

<212> DNA

<213> *Pinus radiata*

<400> 1597

tgcataatag	caggagaggt	ccccggccga	acagacaacg	aaataaagaa	ctactggaac	60
actaacttga	gcaagaaact	tgtgttcagg	ggaatcgatc	ccaagactca	taaaaaaatc	120
acgacggagc	gcacgaacag	agtcacaggt	gatcgtttca	gccagaggaa	aggtgagaaa	180
atatatgatt	ctccacagaa	acctcgacag	ccggaaagaa	atgttgcgag	ggccgcccaa	240
tcaacagggc	tcgtgatctc	taattgtcac	aatctaaag	cggatttaaa	agcgaatat	300
atgtcaagaa	tcagagaatt	taaaagctct	aatactatca	gctcctcttc	tcgacttaat	360
gcacagattg	agccaaagtc	cagagag				387

<210> 1598

<211> 276

<212> DNA

<213> *Pinus radiata*

<400> 1598

ggtttgtcag	atttggtagc	gagaatgaga	aaaaccgagc	catgactgaa	atgaattggtg	60
ttttattgtc	ttcaagacct	atgcgaatta	atgaagctac	accaagaag	tccttgggat	120
ttcaacaacc	ttattccatt	aaaggtaact	attacacaca	ggcatatggt	ggtgcagttg	180
ctagtgcagg	cttccagtc	gacaatgatc	caaatataac	aactatattt	gttgggtgggt	240
tagatccaaa	tgcgacagat	gaagatctga	ggcagg			276

<210> 1599

<211> 374

<212> DNA

<213> *Pinus radiata*

<400> 1599

cacatcttga	gcgaataaaa	aatctacgtg	atggtggagc	tgggtgctgaa	gacagcgacn	60
aaaaggatga	agactttggt	gcgaaaaacg	atgatgctgg	atctccaaca	gatgagtcag	120
aagaagaggg	atcagatgca	agtgcagagc	cagagggtcaa	gcaacctgca	aagaagaaga	180
taagaaaaaa	aaaggcggtg	gctcccaagg	caaccgagac	caagaagaag	aagaaggagc	240
acgaggaaga	gggagaaag	aaaaagcagc	ggcgaaagaa	gaaggatcca	aatgcgcca	300
agaaagccat	gactggattt	atgttctttt	ctcaagttag	aagagagaat	ctgaaaaaga	360
gtgacccaag	aatg					374

<210> 1600

<211> 334

<212> DNA

<213> *Pinus radiata*

<400> 1600

gatctgtggt	gctgtttgat	tccgcaagct	tggggagatc	aggatctgct	ctttgttgta	60
aatgtcgata	ttacccaat	cagattccat	tcattattagg	gaagtatggg	ccgataatct	120
ggaagaggag	tttaactcga	tacgggaaat	tgtgtgatgc	tacctctga	tagccatgga	180

cacagagttc	cctggcatag	ttgtgcgacc	cgtagggcaaa	ttcaggaccg	tccaagaata	240
caattatgaa	accctaaggt	caaatgtaga	cgatttgaaa	taataacaat	tgggcgctgac	300
gttttctgat	gaacgggcaa	cctcccaaac	tgcg			334

<210> 1601
 <211> 401
 <212> DNA
 <213> Pinus radiata

<400> 1601	
gttaggcacg	ctcttagttc
acggaaagcg	ttattaagaa
gtcaggagtg	gtgggtgaaa
atacagaac	atccagaatt
gtacacagtg	gtggaggaat
agccgcgagc	ctgccgcttg
tgaaaagggg	cagagcggtg
	tgctgtgtgg
	agggctcggn
	g
	60
	120
	180
	240
	300
	360
	401

<210> 1602
 <211> 462
 <212> DNA
 <213> Pinus radiata

<400> 1602	
ggtttgtcag	atttgggtgac
tttatgtctc	ttcaagacct
ttcaacaacc	ttatctcatg
ctagtacagg	cttcagatca
tagatccaaa	tgccagcagat
tgtatgtgaa	aataccagtg
ctgccagaga	agctttgcaa
ttcttggggg	cgatctccag
	caaacagca
	gactgcaagc
	tg
	60
	120
	180
	240
	300
	360
	420
	462

<210> 1603
 <211> 358
 <212> DNA
 <213> Pinus radiata

<400> 1603	
cagcgaagcc	gatttccaaa
cgactggcg	gaaaggggtac
gcagatgaca	agagacttca
attgaagaag	tcaaatattt
caggcttcta	ttctgtccaa
caagatcttt	tcctgggtat
	catcaatcag
	cttggaaccg
	agagttttgc
	caatctga
	60
	120
	180
	240
	300
	358

<210> 1604
 <211> 358
 <212> DNA
 <213> Pinus radiata

<400> 1604	
accaagctca	tcacatggcg
atgataaac	tacaatat
acgaggtaga	gaaggtactt
ttatcatccc	caaagtaagg
aggatattct	aggtcacctg
ctgatggctt	cagaattgtc
	attaacgatg
	gtcctactgg
	atgcacatct
	gtgtacca
	60
	120
	180
	240
	300
	358

<210> 1605
 <211> 461

<212> DNA

<213> *Pinus radiata*

<400> 1605

gcggacttta	ttgtaaaaga	gccaatgggt	attggtcagt	agtcgtctg	aataattgag	60
gaggttgcca	gtgaagtga	acatctgggt	cctgggtgacc	gcgtagcttt	ggagcctgga	120
atatcgtgtt	ggcgttggg	ccaatgtaag	cgaggctcct	acaatttgtg	tcccagagatg	180
aagttttttg	caacacccct	cgtgcattgt	tccttggcca	atcagattgt	tcatcctgca	240
gatttatgtt	tcaagttgcc	agataatgta	agtctcgagg	aaggtggcat	gtgtgaacca	300
ctcagtggtg	gggttcacgt	ttgtgcgcgt	gcttctgtag	gtcctgagac	aaatgtcttg	360
gtaattgggg	aggtcctatc	ggccttgcta	cgtgctgtgc	tgcacgtgca	tttggagctt	420
cacgaattat	tattgctgat	gtagatgaag	agcgctctgc	a		461

<210> 1606

<211> 463

<212> DNA

<213> *Pinus radiata*

<400> 1606

gccactgttt	gtaatgtgat	tccgggcctt	gagctttatc	gtttttcagt	tgcaggtttg	60
gagcctgtca	aattataact	accatgattt	ggaaagaagc	tgcgcagctg	ctacacaagg	120
cccaacatct	ggagaagcca	cccttcatct	ttaactgtatt	tatgcgcatc	tttataggat	180
tgcgcgcctt	ctcgtatctc	atcactaaac	gtagaactag	ggaattacga	ggaatcccgc	240
ccggcacctt	tggatggcct	ttgatcggcg	agacattaga	atttctggga	tgcagagaaa	300
ggggaaaggcc	ccaggatttc	tgtgaccgtc	gaacacagaa	gtatggaaac	gtgttcacca	360
cttcccttgt	gggcaccoga	cagtgggtat	atgtagtccc	caaggcaaac	gctttctgtt	420
cgcccaacgag	aacaaactgg	tggtaaaattc	atggcccgcc	tct		463

<210> 1607

<211> 410

<212> DNA

<213> *Pinus radiata*

<400> 1607

tcttgacttt	gctaagtaga	cattcggccc	aagcttagtc	gttgttatcg	ctgccctgtt	60
ctctcacaat	ctatgctttt	tgttgttcaa	tgcctgctct	cgctgcagac	ggctctacag	120
gcgatggcga	gtgggttcgg	agccatcacc	caatatggat	gtccgaagaa	ctgaatctgg	180
catcgagaaa	aaggattttg	aagcactttc	agccacagtt	taccgcaaa	cccccctctt	240
cagagccatg	gatttgcctc	tttgctggcg	ggaattcaaa	gaaggagaaa	aggtgagagt	300
attaccagaa	tgcgttcaat	gttttcaatc	agattgcata	gaacgatggc	tgctttccaa	360
tgcttcttgt	ccttctatgc	gacacactgt	ccttttgcga	ttgccgaaga		410

<210> 1608

<211> 357

<212> DNA

<213> *Pinus radiata*

<400> 1608

taataattgg	gtactgtgga	gatttttctg	tgcattgacc	attacaattg	ctgagacagt	60
gggttttgag	gttgccatgt	cttgccgaag	ttgtgttgga	gctgtaaaac	gagttctcaa	120
taaaatggaa	gggtgtggaa	catatgatgt	gaacttgaag	gagcaaaaag	taactgtgaa	180
agggaaacgtg	aagccttgatg	ccgttctgca	aactgtttca	aaaactggaa	agggaaacatc	240
ctttctggcca	gaagagaaag	atgccaccac	gtgatgggtc	atattctcag	gtttaatatata	300
gatatggaca	tatatgtaac	atgctttttt	gagggcattc	taataatatt	tctaata	357

<210> 1609

<211> 222

<212> DNA

<213> *Pinus radiata*

<400> 1609

ccaagaacgc	gggaaggaag	aggatgaatt	tgtacagagg	catcacagac	cgtccatggg	60
gaaaatgggc	tgcggagatt	cgagatccca	gaaagggggt	taggggtttgg	cttggaacgt	120
ttaacacggc	cggaggaagc	tgccagggcc	tatgacgcag	aggcttagaa	gatttagagg	180
aagaaagcta	agcttaacct	taccgatgat	tcatgctcag	ta		222

<210> 1610

<211> 302

<212> DNA

<213> Pinus radiata

<400> 1610

gttcagccta	tggtgtctgt	ctaaatcgct	tcacaaaatg	tcgatccatc	tggagagacc	60
tcttataaact	gaatatacaag	tgcgtatgga	ctgtaattggc	tgcggttcaga	agatacgcag	120
agctctgcaa	actcttcaag	gcatttatga	cgtttacata	natttcccc	aacaaaaggt	180
gacagtggta	ggatgggttg	atccagacct	attaatgaag	gccataaaga	aagccgggaa	240
aagagccaaa	ctgtgcagcc	acgtacgcga	tgaagaaacg	gtcgagagag	cgcacccggc	300
gg						302

<210> 1611

<211> 268

<212> DNA

<213> Pinus radiata

<400> 1611

gaatgaagtt	agatacggca	aagaaaggcc	ttcctccagg	caccatggga	tggcctctct	60
ttggagaaaac	tcctgatatt	ctcagatgat	gtcaacaatt	tatcaaaaac	agaaaggcca	120
gatatggaga	tttgttcaag	actcacattc	taggatgccc	gacggtgata	tcgacggatc	180
cagctctcaa	cagatataat	ttattgaatg	aaggccgagg	actaatctct	ggatacccgc	240
agcttatgct	tgacacattg	ggaaaatg				268

<210> 1612

<211> 312

<212> DNA

<213> Pinus radiata

<400> 1612

gctcaactgga	ataaacactc	ttcgcaccca	gcccttcaaa	cttccccctc	tggcccccat	60
gatcgcaagg	tgcgcacgaa	ggctgtgggt	atctgtggca	gtgacgtcca	ctattttagg	120
acattacggt	gtcgcgactt	tattgtaaaa	gagccaatgg	tgatttggtca	tgagctctgt	180
ggaataaatt	aggaggttgg	cagtgaaagt	aaacatctgg	ttcctgggtga	ccgcgtagct	240
ttggagcctg	gaataatcgt	ttggcgttgt	gaccaatgta	agcgaggctc	ctacaatttg	300
tgtcccgaga	tg					312

<210> 1613

<211> 324

<212> DNA

<213> Pinus radiata

<400> 1613

gctgggtaca	gcttatgcct	tccgattcgt	gggtgaattg	atgaaatggc	tatacttggg	60
tgtaacaaaa	cggtttggag	caaaggattt	ctcaacattg	gctgaagcac	atgcatgtac	120
tgctgggtta	aagtcattga	caacatcagt	gactgcggat	ggcattgaag	attgtcgtaa	180
gctttgtggt	ggacatgggt	acttgtgcag	tagtgggctt	ccagagctgt	ttgctgtata	240
tgctcctgct	tgacacatat	aaggagataa	cacagttctg	cttctacagg	tagcaagatt	300
cttgatgaag	acagtcacac	aact				324

<210> 1614

<211> 395

<212> DNA

<213> Pinus radiata

<400> 1614
 gttccacgga gaggagagcc tcagctgtct cgatctggcg ttaaggggtt acngaagaag 60
 aattttcgaag atggttagat ctctctgcta ttcaaaagcaa ggtcataggc gtgggattttg 120
 gaccctctatg gaggatatga ttctctctga atacattcga attcatggca gtgatggatg 180
 gaaaaatctc gctaaaacgag caggtcttaa acgatgtgga aagagtgcga gattaccgtt 240
 ggttgaacta tcttcgcccc gacattaaac gtggttaacat ttctcctgat gaggaggacc 300
 tcattatag gtgcatggc ctctctggca atcgacggac gactaccggg tcgaacagac 360
 aacgaatca agaattactg gcacactcat atgag 395

<210> 1615
 <211> 231
 <212> DNA
 <213> *Pinus radiata*

<400> 1615
 ttacattcaa tcaagctcat cacatggcgt ccganaagga agctgctctt gctgccacac 60
 caccagaaga tgataaacct acaatatctg acnaaatact gcngaaagag attcccaatn 120
 caggngttta caaggatcga aaggtacttn cnttcaggga tatngcnccc caagaccta 180
 ctccatcat tatcatcccc aaagtaaggg atggcttgac tggcctatct a 231

<210> 1616
 <211> 396
 <212> DNA
 <213> *Pinus radiata*

<400> 1616
 ccggtccggg cgggtggagag catcagcctt ggagttacag accaggaaaa tacaagatgg 60
 gtgagatctc ttgctgtccc aaagaggggc tcaaccgcgg ggcctggacc aaaagggagg 120
 atatgattct ctcgcaatac gttcgaattc atggcgatgg tggatggaga aatcttccgg 180
 aaaaagcagg tcttaagaga tgtggaaga gttgcagact acgctgggtt aactatcttc 240
 gtcccagata taaacgcgga aacatttgcc ccgcccagga ggagcttatt attcggctgc 300
 atcgctctct tggcaatcgg tggctactga tagcaggaag actgcctggt cgaacagaca 360
 acgaatcaa gaactactgg aacactcatc ttgagc 396

<210> 1617
 <211> 296
 <212> DNA
 <213> *Pinus radiata*

<400> 1617
 gtgcgcgtcg gcggcggtcg cgaggaaacg gcggcgctcag ctgtgaagga aacgcatttc 60
 anaggcgtga ggaagaggcc gtgggggaga ttgcgtcgcg aaatcagaga tccctggaa 120
 aagacagac ctgcgtcgcg caactttgac acagccgaag aggcgcggcg cgctatgat 180
 aatgccgccca gaaatctacg cggccccaag gccaaaacca atttgcgtat ccacagcgat 240
 agcgccgcgc ctgttcaaca gtggcggtcg acgcgcgctc cctagtcagc gacaag 296

<210> 1618
 <211> 381
 <212> DNA
 <213> *Pinus radiata*

<400> 1618
 gagctttctc tcaagaacat tcttacagca aatgagcaga ctacaactgc agaaccaga 60
 aataataata cagttgtttt cctggaatct attactaatc catctgtcag agttgcggat 120
 ttaccgtcta ttccactcgt atgtaaaaag tatggagcat ttcttatagt agataataca 180
 tttgtcacac cgataaagga caagcccatc aagcagggtg ctgacatggt catctattca 240
 gtaacgaat ttcttggtgg ccatagtgat ctggttcgag gagtagttgc aggccttct 300
 caccacatag agttagctc aaagctggta ggtcgctggg ggctgctgac tgcctcatte 360
 gattcatggc ttgccactgc c 381

<210> 1619

<211> 373
 <212> DNA
 <213> Pinus radiata

<400> 1619
 cggtccatgt gacttcgaca tccatgagtc ctgcgcccac gctcctaacg ccactctcca 60
 ttctctgcat ccccgagcct ctctcgtgtt gagggacaaa ccagttttcac cacaacgcgt 120
 atgcgacgctc tgtgggaagg atgttttagg attcgtttat gactgcgctg aatgtgacgt 180
 ggagcgttcac cctcctctgt caccagctgc gcagacgctg cgccacgctc tgcattccaca 240
 ccacacccct caactctccc atggacctga agctcccgcc cctcctgcac gctcctgtta 300
 cgtatgcgga gaagcctgta gccctgggca ctggagctat cgttgcgaat tagccagtcg 360
 gccgtgtgat ttc 373

<210> 1620
 <211> 137
 <212> DNA
 <213> Pinus radiata

<400> 1620
 caccgggttcc agactctttt catcttcatt attcttccgc ctgtgaaaaa atggggagat 60
 ctccgtgctg tgagaaggct cataactaaca aaggggcctg gactaaacaa gaagatgacc 120
 gccttatcgc tcacatt 137

<210> 1621
 <211> 372
 <212> DNA
 <213> Pinus radiata

<400> 1621
 gttccacgga gaggagagcc tcagctgtct cgatctggcg ttaaggggtt acagaagaag 60
 aatttctgaag atggttagat ctctcttcta ttcaaacgaa ggtcataggc gtgggatttg 120
 gaccctctatg gaggatata tttctcttga atacattcga attcattggca gtgatggatg 180
 gaaaaatatc gctaaacgag cagggtcttaa acgatgtgga aagagttgca gattacgttg 240
 gttgaactat ctctgcctcg acattaaacg tggtaacatt tctcctgatg agggaggcct 300
 cattattagg ttgcatggcc ttcttgacaa tcgcaggacg actaccgggt cgaaacagaca 360
 acgaatcaaa ag 372

<210> 1622
 <211> 464
 <212> DNA
 <213> Pinus radiata

<400> 1622
 ctgaattgca ttctcttagtc ggcaaaaaata ttaagagtc aagacaaaaga gggggttacg 60
 ggagcaggct gcgggttcga tcccaagata aggaaaaaag aaagaaaaatt tcatgaattg 120
 ggctctgtag ttccagtcac gaaattaaaa cctatcggtc tctgtctcga gctaaagtgt 180
 gggaaaaagc taagctctca ggggaatgggt tcccgacaaa tgcgtctctc taatgggtgc 240
 cggaacacct agttccaacc actcgttcgt cagaattctt tatacaattt aacgctggag 300
 gaggtccaga accagctcgg ggaagccagc aagccactta gcagcatgaa catggacgag 360
 ctctctgaaga acatttggac acaagagaaa gccaggctat atccatggcg atcggaatg 420
 ggcccatgaa cgggtgttct cccaactctg cccctgccag cggg 464

<210> 1623
 <211> 436
 <212> DNA
 <213> Pinus radiata

<400> 1623
 aagaaaaatg ggctgaatag tctcaggag gggttttaaa tgaatgagta ggtttttctg 60
 gggtgagatt ctttcatatt tatgcgtaaa acgttgactc caatcggcgt gaaacaaacc 120
 aatagaatc ccaaatgtat ttctttcaat ttcattctgat acacagagag aattcagtc 180

<40> 1627						
caacatccata	catgtggggg	ggacagcggt	tgatgccacc	ttaggggact	ccactaccat	60
atctcgcaat	gtatcccaat	ctgggaaatct	atgcacatcc	tccaatgctc	ccgggtggac	120
ttctcgatgg	tcatcatgga	atgccatcac	ctggcaaatgc	tgaagttaac	acgactcttag	180
caactccaaa	tgtcgaagca	gaagcccaatg	ctctgggaagc	cgaagacggg	aatacataatg	240
agagatcaaa	aggaagttta	aggaacccct	gaatgattac	tggcaaaagg	gagaaaggtg	300
cggaaggcaca	atcgggattc	gcaaatgagg	ccatgtcaca	aagtggggac	agtggaagtg	360
acgactccaa	cga					373

<210> 1628
 <211> 512
 <212> DNA
 <213> *Pinus radiata*

<400> 1628
 cggtaatagc atagagggat tatacagagg tggattgtta ttgaaaccca gtagtggagg 60
 tagagctctg acaagttggg acaaaaggagg gaattccacg gatgtttatag atatggatat 120
 agggactcgg agactaacag gttctgaaag gagacatgac aaacggaatc ctacatttac 180
 agaccattat agacattcag acagtgatcg aatgaagatg aacagctact tatattccaga 240
 aaacaacaat agcaccggcg ttgttcgctc tctgtttgtt cccaggaacg acaaaacttg 300
 aaagattgat ggcaacctta taatccatgc agttctagct ggggaaaaag cctcgagagc 360
 attactctgc tcacagtcta gaggcaacaa agatgggcat gtagacacca ttctacttca 420
 aaaggaatat gaaaagaata gtttggcagt cagaacagaa aggcacatcgt ctcttgctgc 480
 tgctgccgcg gccactacag attcagccag aa 512

<210> 1629
 <211> 395
 <212> DNA
 <213> *Pinus radiata*

<400> 1629
 gagaaaaagg acctgacctc atcgaacatc tcacaggggg agattgatca aacacaaaaa 60
 ccgtaaaatc gcagcgaaaa tccaaaatcc caccatgggg actgtggcgg aggatggcag 120
 caaggggttac aaggccgtaa atccccatcc caaaaagggg gtcgcctcgt ggctgggtga 180
 catgggtgag aaactgtggg ttgaaacttc tgcgttgtat agttcgaaga agcctctgca 240
 tttctttttg gggaacttcg ctccagtcctc ggaactgcc cccaaatcgc acctgcctgt 300
 tgttggggcaa ctctcatagt gcttggatgg agagtctgt cgcgttggtc ccaatccgaa 360
 attcgccacg gtatctggct atcactgggt tgatg 395

<210> 1630
 <211> 285
 <212> DNA
 <213> *Pinus radiata*

<400> 1630
 ctctgcattt tcttttgggg aacttcgctc cagtcctgga aactgcccc aaatcgacc 60
 tgccgttgtt tgggcaactt cctagtgtct tggatggaga gttcgtgcgc gttgggtcca 120
 atccgaatct cgcaccggga gctggctatc actggtttga tggagatgga atgatccatg 180
 gtctcagaat taaagatggt aaagccacat atgtgtcacg ttatgtgaag acatcacgct 240
 tgaacaaga ggaatacttt gggaaagcaa aattctttaa gattg 285

<210> 1631
 <211> 438
 <212> DNA
 <213> *Pinus radiata*

<400> 1631
 gtttttcaaa gctcaggttt aacagaaaat acccgggaaa attaacaaga aaaaaggaaa 60
 aacagagatt ttgtttatct ctgtttatag tctgctaaat tgggttttga taatttaatt 120
 aattaaggcg ggggcccgca cctccaggca gtggcgagga ccagtggcg gcccgtccac 180
 ccgaggagga gagccgcgtg cgttttctcg acttcgaacc cgcggctatg gaggcgctgg 240
 atcaggtact ctgcctcgtc ctccgtgaag ttgctgaagg ccaactggga gaagccggcg 300
 gcggcgaaac gggctcttca tggcgagacc ggccggagag gaaatgttgg cgtcgacttt 360
 cggagctagc aggaactctt cgaatcttgt caccgctccc atgtgtgatg tcaacggcatc 420
 cagtgaatcg aacaggaa 438

<210> 1632
 <211> 457
 <212> DNA
 <213> *Pinus radiata*

<400> 1632
ccatattcgaa acattcacag ggggagattg atcaaacaca aataccgtaa aatcgagcgc 60
aaaatccaaa attccaccat ggggagctgt gcggaggatg gcagcaaggc ttacaaggcc 120
gtaaatcccc attccaaaaa gggcgctgcc tctgtgctgg tggacatggt ggagaaactg 180
gtggttgaaa ctctctgctt gtatagtctg aagaagcctc tgcattttct tttggggaaac 240
ttcgctccag tctcggaac tgcgcccaaa tgcacctgc ctgtgtgttg gcaacttctc 300
agtgtctggt atggagagtt cgtgcgcgtt ggtcccaatc cgaattctgc accggttagct 360
ggctatcact ggtttgatgg agatggaatg atccatggtc tcagaattaa agatgggttaa 420
gccacatatg tgtcacgtta tgtgaagaca tcacgctc 457

<210> 1633
<211> 318
<212> DNA
<213> Pinus radiata

<400> 1633
aattgttgat aatcacagttc cattgagtg accgtattca gttatttgta gggcactttg 60
tgtccatgag ttagaggatg acctggggaa aggtgggcat gaacttagtc tgacaactgg 120
caatgtctgg ggcaggttgg ctgtgtgtgt ggttggactc actccattt aaggccactg 180
caaatatgga atgattctca aaggtcatgg acatcgtatg aaaccagtga ctgcaataat 240
aattccaaaa tatatgtctc ttatctctgc aagattgtta gcaattgtga tttgtttttg 300
gtattaacga gttgcact 318

<210> 1634
<211> 211
<212> DNA
<213> Pinus radiata

<400> 1634
gccgtggctg ttcccaggag agggagagcct cagctgtctc gatctggcgt taaggggtta 60
cagaagaaga atttcgaaga tggtagatgc ttcttgctat tcaaaagcaag gtcataggcg 120
tgggatttgg acccctatgg aggatgatg ttctctgaa tacattcgaa ttcatggcag 180
tgatggatgg aaaaatatcg ctaacagagc a 211

<210> 1635
<211> 350
<212> DNA
<213> Pinus radiata

<400> 1635
ggttctctta tatttatgtg cagattgcct ggacggacac ttgccaatgg acgtctcata 60
tggtctgtcc aggccaaaga agcgacagc aaagtctctc cagctgtctc tctgtctaag 120
agcgctcta ttacagactgt tgtatgcac cctctgcgg acggtgtctc ggagcttggg 180
actactgaag tggagcgaga agacctgggt ctagtccaac gcaccataag cttttttttg 240
gagtaaccca aaccgatatg ttacagacaa tctacatcca gccacagtg ctacagacaga 300
gacgaaaagg atcaagtggg catgggtcaca ataatgtctc ccgacagcat 350

<210> 1636
<211> 356
<212> DNA
<213> Pinus radiata

<400> 1636
ggttgtctga ttccaaacga aaggatttgc ctctttctac atgtctataat cgaggatctc 60
tgacgtctct tactagttaa ggtcattccg tttcaacagt aatctctcgt attgaaaagg 120
aggaagaaga gtttgtcttt gttgacattc ctgaagagcc aatctctctc ctactacgca 180
attatagtgc tctgtgtcgt ctgttttcag atatcactga tgatgatttg tactttctac 240
ttgcacatga ttacagatga ttaaccggt gggaggctgg ccagacattg gcaagaaaac 300
tcctgtctc tctgtagat aaggcgcaac agaatacacc attgagtgtg gaccca 356

<210> 1637
 <211> 362
 <212> DNA
 <213> *Pinus radiata*

<400> 1637
 cgagggtccg ttcaaccctt ttcattctca atcggtccaa ggcctcttcg gctgcctcgg 60
 gtgcgtttct gaattttctc ccaagtgcgt gactcgatcc agccttgttt caggcgaacc 120
 tgttgtgggt ttgggttttc ttggcttttg ccttttcatt ctttgtttcc ttggattcga 180
 actcgagatc tcttgaatat tatggcacag gagagctgga accaggagga gaccgggtgc 240
 caagtcccg aagggtcctat gcgctgtgcc aacaactgtg gcttcttcgg aagtcgggcc 300
 accatgagtc tctgctccaa gtgttaccgc gaattcgtgc tgctcaactc ccttaaatgc 360
 tc 362

<210> 1638
 <211> 359
 <212> DNA
 <213> *Pinus radiata*

<400> 1638
 cgaactcga atcgatatgc tttgtggcgg gttcaaatat ttgagctggc ttagcttctc 60
 tggttcagaa atggcggact aaagtaatat tgtgccccga ggtctggtgt tcgaattctc 120
 ttggcgtaaa aggtcaaat tttctctcga gtttcattga tttcgaataa ctggcatagc 180
 tatggcgatg agcaatggga gatttgtgtga agatttggat aggattaagg ggcggtggag 240
 ccccgaggag gacgcgtcgc tgcagaggct tgttcagaaa tacggggcga ggaactggac 300
 cctgataagt aaaggaatcc cggggcgatc cgggaaatcg tgcaggctac ggtggtgca 359

<210> 1639
 <211> 299
 <212> DNA
 <213> *Pinus radiata*

<400> 1639
 cgagcaacag cgaagccgat ttccaaagat ggatagggag aaactcatga agatggctgg 60
 tgcagtcgcg actggcggaat agggatcaat gcgaaggaaa aagaagacaa ttcataagac 120
 tgccacggga gatgacaaga gacttcaaa gaccttgaat agaattaggc tgaataacat 180
 cctgtctatt gaagaagtca atatttttaa ggatgacat gtatttcatt ttgctaaccc 240
 aaaggtccag gcttctattg ctgccaacac atgggtgggt agtgggcac gcaaacaaa 299

<210> 1640
 <211> 300
 <212> DNA
 <213> *Pinus radiata*

<400> 1640
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 aagttgttat ggggggaatt atgctggtcg ggtcgacgat gattcctcgg ggcggcgcg 120
 cggcagcgcg ggagacgtcg gtggaggaag gaggagaatt gaataagatc gaaagcccta 180
 caccattacc aagtcagag aaagctggac tgagcaggag cacaacaaat ttctgcgaag 240
 ctatgcagcc tgtttgatag ggactggaag aagaattgaa gcatttggtt ggttcacaag 300

<210> 1641
 <211> 311
 <212> DNA
 <213> *Pinus radiata*

<400> 1641
 gttcagctgt tcgcaaaagc cggagcgaaa gtcataatcg cagacgttgc agagaaagct 60
 ggacagaagc ttgcagaatc cctttctcca gcatcggaac cttatgtgca ctgtgatgtc 120
 agcaaaagag aagacgtgag cgcggtgtg gatctggcta tggataagta tgggtcaactc 180
 gacattatgt ataacaacgc tggaaactaac gacagcttcc tggatgaagag cgtggcagag 240

tatgatattgg	agcaattcga	tcgagtgatg	aacgtaaacc	tgaaggaggt	gatgcacggc	300
attaagcagc	c					311
<210>	1642					
<211>	350					
<212>	DNA					
<213>	Pinus radiata					
<400>	1642					
agggatcagg	caacgtccat	gggggaaatg	ggctgcagag	atcagggatc	ccagaaaaagg	60
cgctagggtt	tggctgggta	cctttaatac	ggcggaggaa	gctgctcggg	cttatgatgc	120
agctgcacga	aagatcagag	gtaagaaggc	gaaagtaaat	ttgtttgatg	agccaccacc	180
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aaaatcatat	ctaccacaaa	gcttgacttt	tctgaagggt	tcaaaacggc	gaacctctcg	300
attgcccaat	acaacttcca	tcagaaattc	ccaaacccta	actgtgatga		350
<210>	1643					
<211>	322					
<212>	DNA					
<213>	Pinus radiata					
<400>	1643					
gacttttggc	cgaactgtt	ctgctgaaac	aaaatccagt	attgagctag	gtttagaatc	60
gggttttggc	gtcatctggg	agaggcgatc	cattcagctt	cgcaggcccc	cgaagatggc	120
gttcgcccgc	acaaccacga	agtgcagggc	atgtgaaaag	acgggtctatt	tggtttgatca	180
attgacagct	gataattctg	tttttcacaa	atcctgtttc	cgcgtccatc	actgcaatgg	240
aactttaaag	cttagcaact	attcgtctgt	tgaggggagt	ctatattgca	aacctcattt	300
tgaccagctg	tttaagagaa	ca				322
<210>	1644					
<211>	345					
<212>	DNA					
<213>	Pinus radiata					
<400>	1644					
gccgaaactc	gaatcgatat	gctttgtggc	cggttcaaat	atttgagctg	gcttagcttc	60
tctggttcag	aaatggcgga	ctaaagtaat	agttgtcccc	gagggtctggt	gttcgaatct	120
cggttggcgtg	aaaggctcaa	ttttctcttc	gagtttcatt	gattctgaaa	aactggcata	180
gctatggcga	tgagcaatgg	gagatttgtt	gaagattttg	ataggattaa	ggggccgtgg	240
agccccgagg	ggacgcgtcg	ctgcagaggc	ttgttcagaa	atacgggccg	aggaactgga	300
ccctgataag	taagggaatc	ccggggcgat	ccgggaaatc	gtgca		345
<210>	1645					
<211>	508					
<212>	DNA					
<213>	Pinus radiata					
<400>	1645					
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gaaaatggaa	ataatgatga	tcaaggcaaa	ggtattacag	aggtccatcc	tcattcccaag	180
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cccgccgaca	cagacttgct	cgctattgga	aatctcccta	aatgcttgga	tggagaattt	360
gtgcgagtcg	gtcccaatcc	cagattttgc	ccccgcgtg	ggctatcatt	gggttcgacgg	420
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ccgtcaaaac	ttcactgtct	aagcaaga				508
<210>	1646					
<211>	368					
<212>	DNA					

<213> Pinus radiata

<400> 1646

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gaaaaagaaa	atacaagatg	ggcagatctc	cttgctgctc	aaaagaagg	ctcaaccgtg	120
gggcctggag	caaaagggag	gatatgattc	tctccgaata	cattcgaatt	catgcccagt	180
gcggatggag	aaatatgcc	aaaagagcag	gtcttaaacg	gtgtggaaag	agctgcacga	240
ttacgatggc	tgaactatct	tgcgcccgac	attaaacgtg	gaaacatttc	ccctgatgag	300
gaggaactca	taattcgctc	ccatcgccct	cttggcaatc	gatggtcgct	tatagcattg	360
aagattac						368

<210> 1647

<211> 367

<212> DNA

<213> Pinus radiata

<400> 1647

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cggatttgaa	ttctctcgag	gattgacaag	atgacgcgca	agtgcctcga	ctgtggcgaac	180
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cttacccgat	gcccagatcg	aaagagcgct	agtatggggg	atttgatgat	gatgtccaac	300
cctagctctc	ccgctgaccc	ctccnagccg	gcctctgcgc	cttctgctgc	cgcggcgggc	360
gcggcca						367

<210> 1648

<211> 511

<212> DNA

<213> Pinus radiata

<400> 1648

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agaagaagaa	aatacaagat	gggcagatct	ccttgctgct	caaaagaagg	gtcacaacct	120
ggggccttga	ccaaaaggga	ggatattgatt	ctctccgaat	acattcgaat	tcattggcgat	180
ggcggatgga	gaaatatgcc	caaaagagca	ggctctaaac	gggtgtggaaa	gagctgcaga	240
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gaggaactca	taattcgctc	ccatcgccct	cttggcaatc	gatggtcgct	tatagcagga	360
agattaccag	gtcgaacaga	caacgaaatc	aagaactact	ggaacactca	tatgagcaag	420
aagctgcttc	cattgaacga	atctcaacc	aagactttgc	ctgtccccc	gaggaggctc	480
caatctcttc	ctccctcgca	aaatcgagtc	t			511

<210> 1649

<211> 364

<212> DNA

<213> Pinus radiata

<400> 1649

tgcgcctcca	tccgacaaaa	caagtggggg	acatgcata	tgcaggtgtg	gagaacactg	60
cagctgcaat	ccatgtaact	gttcaaaagt	tgacgagact	gttagtggga	aatccttctg	120
taaatgtgga	gagaattgag	cctgtgaaac	atgcacctgc	agcagagctg	gaatatagcc	180
tagttgattg	tttttctcag	ccagaactta	ggattccatg	accactagta	ataagatgca	240
gtatcaatag	cagctgatgt	ttatgtatgc	agtaagttta	taaaagagag	tggttacttt	300
ttggccttag	taatttggtg	cttatgttat	gtatgtagta	agtttatctc	caaatacaga	360
gcgg						364

<210> 1650

<211> 354

<212> DNA

<213> Pinus radiata

<400> 1650

caagagtaaa	cccgaaggaa	tagaagggga	aggaggcatc	ggcagcgctg	ttcctcctcc	60
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tcgtctttga	atctgtgcga	aaccactctg	atcgcttgaa	cactggaaat	atggaccatg	180
gtttgtccca	ttacaggaga	cgatgtcgga	ttcggggccc	ttgttgcaat	gagatctatg	240
attgtaggca	ctgtcacaat	gaagccatga	gccatctaaa	ggaccctctg	ctgcgccatg	300
agctcccaag	atacaaaagt	gaacgggtta	tttgttctct	ctgtgacact	gagc	354

<210> 1651

<211> 424

<212> DNA

<213> Pinus radiata

<400> 1651	
cttctctgggt	ttgttctgtg
tcactacaag	ccttttagcaa
gtcatattcc	atgtttccca
aacctctagt	caggtctccg
taaaactgacg	atcgatgaaa
gaggtccagg	atgagaaagc
cagagcagag	aacagtcata
gctgt	

<210> 1652

<211> 422

<212> DNA

<213> Pinus radiata

<400> 1652	
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tcaaaacaaa	cagcctcgag
gaagttctcg	ctcatgaaag
ttagataaaa	agttgacaca
attcaagagt	accgagtcg
aagggctcct	ggtgtgaaac
atgcaatagc	aataacatgt
tt	

<210> 1653

<211> 357

<212> DNA

<213> Pinus radiata

<400> 1653	
gnacgagctc	gatctggcct
ttcttctgat	tcaaaagcaag
tctctctgaa	tacatttcgaa
aggtcttaaa	cgacgtggaa
cattaaacgt	ggttaacattt
tcttgccaat	cgatggtctt

<210> 1654

<211> 306

<212> DNA

<213> Pinus radiata

<400> 1654	
gcgcattggt	cagctgtgtc
agaaagctgg	cagaagagct
gtgatgtcag	caaagaagaa
gtcaactcga	cattatgtat
tggcagagta	tgatattggag

tgcacg

<210> 1655
 <211> 368
 <212> DNA
 <213> Pinus radiata

<400> 1655	
cttcagtttg ccattgaaga ccaataaata attattgtga agcagcagcg ttttaacag	60
agatccagca agaagaggac caggaaaaat catttgcaga acaagaagat aatccaagat	120
gtcaagcaca cgcagccctc agtgtgggtg cggagaaact tgcgcttgcg ccgattgcaa	180
gtgtggagtt gtgagtattg cgctccatcc cgaccaaaca agtgggggac atgcatattg	240
caagtgtgga gaacactgca gctgcaatcc atgtaaactgt tcaaaagattg acgagactgt	300
tagtgggaaa tccttctgta aatgtggaga gaattgcgcc tgtgaaacat gcacctgacg	360
cagagctg	368

<210> 1656
 <211> 333
 <212> DNA
 <213> Pinus radiata

<400> 1656	
ttgaattctt gtcttcccc cagctgagcg tctctgagac caagtgaga ttcagccagt	60
agttaagctat agattgatag ttcagagaaa agactgaaag gcaaaaacta tatagacata	120
acaacggaga gcagcagaca ggaacaccagt tgcataatgg ctaggccctca aagatacaga	180
ggagtcgcct agaggcactg gggatcatgg gtctctgaaa tccgccatcc ctatttgaa	240
accagaatat ggctaggaac atttgaaca gcagaggatg cagcacgagc atatgatgaa	300
gctgcaagga tgatgtgtgg gccgagagct aga	333

<210> 1657
 <211> 355
 <212> DNA
 <213> Pinus radiata

<400> 1657	
gttccccgct tcctccgtct gctaggcatt tctctgcgat tcttcttctt ctgctcgggg	60
tctctctgggt gaaatcgtec ccgcaggagg agggctgagg gcagggtctcg gctcggctcg	120
gttctgtttcg gcaggagtta tctcagggtt tttctcttga ttttctgcgc ctccggactc	180
gggcttacag ttacagcatc tggaaaaatgg cgtcacagga gagctcaaaa atgcgaagg	240
aagggagctgg gagacaagtg ccggaaggcg ccattcactg ttgaaacaac tgcggtcttc	300
tccggagcgc gccaccatg aacttgtgct ccaagtgcata cagagagcct aacgc	355

<210> 1658
 <211> 341
 <212> DNA
 <213> Pinus radiata

<400> 1658	
ggggaatgat tcttggcgga ggccattcga gcgccatata cattgcggcg gactcgggga	60
agtattgttt tcagtaattc ccttaattgg gtcccagaat acgttctcag atccgaaaaac	120
ggttcagtec atcggaggtt acagcgattc gaaggcctga aaaccctaaa aataacctatc	180
cccctttgtc tttgaatggc ggagaactat ggcagcccg atagcagccc ccggtcggag	240
aacgaatccg gcggcggtca catgggcggc agcgatttct ctgtgaaaga gcaggatcgg	300
tctctgccta tagccaacgt ggggcgcata atgaagaagg c	341

<210> 1659
 <211> 353
 <212> DNA
 <213> Pinus radiata

<400> 1659

WO 00/53724

gaaaaacaaa	gcgaaagcc	accatgtggt	agaggagggtg	ctgaggataa	aggagcttct	60
tgatgattct	tatcagcctc	aggaagtctt	gctagagtca	ctgcagaggt	tgtttaacat	120
gcatatttct	gtggaggctt	tgaaggagac	tgatattggt	agacaaagtga	atggactcgc	180
aaaacattct	tctgctgaca	ttcgaaagct	agtaaaagag	ctcataagga	agtggaaaga	240
tcttgtcgat	gagtggttaa	gcactgcaga	tgaagtgtga	gctgctgcaa	ttgttgatgg	300
agatttctcca	caaggtgggtg	gcagcagaat	ttctcaacag	agtattgtgc	aga	353

<210> 1660

<211> 317

<212> DNA

<213> Pinus radiata

<400> 1660					60	
caagagtaaa	cccgaaggaa	tagaagggga	aggaggcatc	ggcagcgcttg	ttctctctcc	120
ttctctctcc	tgcatctctc	aaactcaaat	acctctctctc	tcacaatcat	ggaaggcgga	180
gtcgctctttg	aatctgtgca	aaacccaactg	gatcgctctga	acactggaaa	tatggacctat	240
ggttgtgtccc	attacaggag	acgatgtcgg	attcggggccc	cttgttgcaa	tgagatctat	300
gattgtaggc	atgtgcacaa	tgaagccatg	agccatctaa	aggaccctt	gctgcgccat	317
gagctcccaa	gatacaa					

<210> 1661

<211> 340

<212> DNA

<213> Pinus radiata

<400> 1661						60
caatggcggc	ccagactate	atcgctgcct	ctatggcatc	tcctctaaca	ttatcaaatg	120
gccactatcc	gtttcagtc	gagttcaagg	ggctccgtgtg	tcgaatccc	cagagggcat	180
ttctctctgc	gcctgcagcc	cgggcgctga	ccgtcgtcgc	agaggccaa	aaggccgttg	240
ccgtgtctcaa	agggaaattca	caggtcgagg	gtgtgttcag	ttctctcgag	gaagacagcg	300
tcccaacaac	agtgaaagtc	cggttgacag	gactgactcc	tggaagagat	ggctttcatc	340
tacatgagtt	tggtgacaca	accaatggct	gcataatca			

<210> 1662

<211> 563

<212> DNA

<213> Pinus radiata

<400> 1662						60
ttcggttcgt	attcagggtt	tggggagctt	gttgtgtggt	gttctgcagg	tcaggacatt	120
gtaggcctgt	ttatacaaga	tttcgaagca	aactctcgga	gcctcgaaga	atcgccgcaa	180
atttcaacgg	ccttataact	atttgggaag	cagtactctg	gattttttct	ccggaacgga	240
tcggagtgtg	cgaagcgtaa	taatcgccgt	gaattgtct	ttctgcaaat	aatattcaat	300
taactctattg	tcgaaggaaa	tttgagccgt	ataagaggat	aatcaaaaaga	agccggttga	360
ttttccggg	attaaaaggat	ggatcaagaa	aactggaaaca	tcggagctga	tggaactcgc	420
tgccaactcc	agaagggcac	actcttttgc	ccaataactg	cggctttttt	ggcagttcgg	480
caacgagaaa	cctgtgttcg	aaatgttaca	gggatctgat	tatgaaggag	gcccaagcct	540
catctgcaat	ggccgccgtt	gagaagtc	ttgcgcggg	ttctccgatg	gaggaggagg	563
cccccttttc	caagccagat	gtt				

<210> 1663

<211> 572

<212> DNA

<213> Pinus radiata

<400> 1663						60
cagcaatggc	ggccagagct	atcatcgctg	cctctatggc	atctctctta	acattatcaa	120
atggccacta	tcggtttcag	tcggagtcca	aggggtccgt	ggttcgaatc	ccgcagaggg	180
catttttctt	cgcgcttcga	gcccgggcgc	tgacagtcgt	cgacagagcc	aagaagggccg	240
ttggcgtgct	caaaggaat	tcacaggtcg	aggggtgtgt	caatctctcg	caggaagaca	300
acgggtccca	aacagtgaag	gtcgtgttga	caggactgac	ttctgggaag	catggctttc	

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atctacatga	gtttggtgac	acaaccaatg	gctgcatctc	aacaggagca	cattttaatc	360
caaaaaaatt	gacacatggt	gctcctgagg	acgatgtacg	ccatgcgggt	gacctgggaa	420
acatagttgc	gggttctgat	ggagttgcag	aggcaacaat	tggtgataat	cagattccat	480
tgagtggacc	tgattcaatt	attgggaggg	cacttgttgt	ccatgagtta	aaggatgacc	540
tggggaaagg	tgggcatgaa	cttagcctga	ca			572

<210> 1664
 <211> 366
 <212> DNA
 <213> Pinus radiata

<400> 1664	
atcgctctcg	cccagagcaat tttgctctc tgctaaacga tgggaagagc gccttgctgt
gccaacggtg	acagaagcaa gggagcctgg accaagggaag aggatgacag gcttacccaa
tatatctcagg	ctcatggaga aggatgctgg cgctctctcc ccaagggccg aggtctgcct
gggtgtggaa	aaagttgcag gctgagatgg ataaattatc ttgcacctga tctgaaacga
ggaggttttt	ctgaagatga agacgatctt attctcaaac tgcacgcctt cctcggaaat
aaagtgtctc	tgatagcggg tegtgtgctt ggtcgaaactg gcoacacaaa tcaaaactac
tggact	

<210> 1665
 <211> 348
 <212> DNA
 <213> Pinus radiata

<400> 1665	
gcattcttgt	cgtagactga ccaacaaccc agtttgaat ttgtgcaata tatctggtca
tgtagccagg	gagtgcccca aggtctcgcat tttggatggt antaggggtg gaagatttat
tgacgatagg	cgtagaagat ttaatgacat aatctgtagg acatgcaacg agccagggga
taccagtagg	gagtgactcg gaattctcat ctgcccacac ttggtgtgccc gtggacatgt
tgcatataaa	tgcccctctg gtctgtgtat gctgcgggac atgcgcaggc attgatgctg
caatttctac	aacaccttga ctttttagat tatctgattt tgacaaat

<210> 1666
 <211> 422
 <212> DNA
 <213> Pinus radiata

<400> 1666	
agagagaagg	gtgttccctg gactgaagaa gagcacaggc agtttttgat gggccttcgc
aaagtagcga	aaggcgactg gagaagtatt tctagaaact ttgttgtgtc aaggacacca
accgaagtgc	ccagccatgc tcaaaagtac tacattccgc ttggttcgga taataaaaaac
aaagagaagt	ccagcatata tgatatcacc actgttcatg gtacagacag gatgccttct
cccttactgc	acgtttctaa taggcagact aattccccct caacacaggc agaaatgaat
cattcccat	gtctgacata tccatctcag atttcacgag gacctctaat aaactctttg
ggacctcaaa	tagatggtaa cttcttattt tcacctcact atctctataa tctgtatacc
ca	

<210> 1667
 <211> 467
 <212> DNA
 <213> Pinus radiata

<400> 1667	
cttgttgtgt	ggtgttctgc aggtcaggac attgtaggcc tggttatata agatttcgaa
gcaaacctct	ggagcctcga agaatcgccg caaatctcaa cggccttata actatttggg
aaagcagtact	ctggattttt ctcccgaac ggaatcgaggt gtgcgaagcg taataatcgc
ctggaaatttg	tttcttcgaa gataatattc aattaatcta ttgtcgaaag aaatttgagc
cgtataagag	gataatcaaa agaagccggt tgatttctcc gggattaaag gatgatcaaa
gaaacttggg	acatcggaag tgatggcact ggctgcgaag ctccagaagg gcacactctt
tgcgccaata	actgcggctt ttttggcagt tcggcaacga gaaactctgt ttcgaaatgt

tacagggatc tgattatgaa ggaggcccaa gctcatctg caatggc

467

<210> 1668
<211> 465
<212> DNA
<213> Pinus radiata

<400> 1668
tccagatgtt cgtggtagac atgaaatctt agagctttat ttgcaaaata agcctctggc 60
tgaagatgtt aatgtgaaag cccttgcctg tggtacacct ggtttcaatg gtgcagattt 120
ggcaaacctt gtcaacattt cggccatcaa ggcagcagtt gatggcagtg agaagtgtct 180
tgccaaacat ctggaatttt cgaaggatag aataatgatg ggaacagaaac ggaagtctgt 240
gttctatca gaggagtcca aaaagctcac tgcataccat gagagtggac atgcagtgtt 300
tgcatttaac actgttagtg caaaccttat acacaaggt acaatcactc ctgcagggag 360
tgctcttggg atggttacac agctgcctga caaggatgaa acatctgtta ataaaaacga 420
attattagca cgacttgatg ttgttatggg cggacagatt gcaga 465

<210> 1669
<211> 421
<212> DNA
<213> Pinus radiata

<400> 1669
cgaaacatgg agtctaaggc acaggctaatt ccatctgttg cttctgtttg taatctcagc 60
aagaatggag agcgacgatt ggaagggaaa gttgttatag taacggggcg ggcagcggcg 120
ataggagaag ccatgtttca gctgtttcca aagcacggag cgaaagtcac aatcgagacg 180
gttcagaga aagctggcag aaagcttgca gaatcccttt ctccagcacc ggaaccttat 240
gtgcactgtg atgtcagcaa agaagaagac gtgagcgcgg ctgtggatct ggcatttgat 300
aagtatgggc aactcgacat tatgtataac aacgctggaa cttaacgacg ctttctgtgt 360
aagagcgtgg cagagtatga tatggagcaa ttgcagtcag tgatgaacgt aaacgtgaaa 420
g 465

<210> 1670
<211> 445
<212> DNA
<213> Pinus radiata

<400> 1670
ccatatcgaa acattcacag ggggagattg atcaaacaca aataccgtaa aatcgagcgg 60
aaaatccaaa attccaccat ggggactgtg gcggaggatg gcagcaaggg ttacaaggcg 120
gtggttgaaa cttctgcgtt gatatgttcg aagaagcctc tgcattttct ttggggaaac 180
ttcgtctcag tctcggaaac tgcccccaaa tcgcaacctg ctgtgtttgg gcaaccttct 240
agttgcttgg atggagagtt cgtgcgcgtt gggtcccaat cgaaatttcg accggtagct 300
ggctatcact ggtttgatgg agatggaaat atccatggtc tcagaattaa agatggtaaa 360
gccacatgat tgtcactgta tgtga 445

<210> 1671
<211> 460
<212> DNA
<213> Pinus radiata

<400> 1671
cagacttttg ctccgaactg ttctgctgaa acaaaatcca gtattgagct aggttttagaa 60
tcgggttttc tggctcatctg ggagaggcga tccattcagc ttgcagggcc cccgaagatg 120
gcgttcgcgc gcacaaccca gaagtgcagg gcatgtgaaa agacgggtcta ttgtgttgat 180
caattgacag ctgataattc tgtttttcac aaatccctgt tccgctgcca tcaactgcaat 240
ggaaacttaa agcttagcaa ctatctgtcg ttgagggag ttctatattg caaacctcat 300
tttgacacgc tgtttaaag aacaggaagt ttggataaaa gttttgaagc cattcctaga 360
gcatacagaa atgacaagat gcatgagaat gagaacagga cacctagtag ggtatcagca 420
ttgttttccg gtacacagga taaatgtgtt gcatgtggga 460

<210> 1672
 <211> 301
 <212> DNA
 <213> *Pinus radiata*

<400> 1672
 ttgttggtgg gagacggaga acattgcttt gttaaattgg tcagcggggt tgcagctgaa 60
 tccgaggctg tgcacatcct aaaagtgttt tacctttgtg gtttggacct taggggtttga 120
 actctttaaa gaaactctca aaatcagcct taaacaataa catacaagat gtccattcta 180
 ccccaagcgc attcctccat aataaggcaa gtttgggcag ataactctgga ggaggagtgt 240
 cctgttgattc gggaattgt ggacgattac ccttatattg ctatggatgc tgagtcttcc 300
 g 301

<210> 1673
 <211> 321
 <212> DNA
 <213> *Pinus radiata*

<400> 1673
 aacacaaaata ccgtaaaatt gcagcgaata tccaaaattc caccatgggg actgtggcgg 60
 aagatggcag caaggggttac aaggccgtaa atccccatcc caaaaagggc gtgcgctcgt 120
 ggctgtgtgga catgtgtggag aaactgggtg ttgaaacttc tgcgttgat agttcggaaga 180
 agcctctgca tttcttttg gggaacttc ctcacgtctc ggaaactgcc cccaaatcgc 240
 acctgcctgt tgttgggcaa ctctctagtt gcttggatgg agagttcgtg cgcgttggtg 300
 ccaatccgaa attgcacgc g 321

<210> 1674
 <211> 380
 <212> DNA
 <213> *Pinus radiata*

<400> 1674
 cctgttcgat atcaactgctg aacctatcag ttgtccatta ccttcgctg ccttgccctgt 60
 attgtcatca cagtcggcct ctgatcaaga agaagccgaa tcaggtgata attctgcaaa 120
 ttctgcagat gtagaacctc ttcttctca ggttgatgaa acagcttctg ctgatctgac 180
 agtgttccca ggttttgtta ccccttatgt accatacggg ttccccatat gccacacttt 240
 tagaccacaa ataactcaaa ctccaatgt ttataagcca acagctgtaa tgccaactgc 300
 tccaataaaa atggacgaat gcacagggtt attccagtta agcctcggcg gtgttgcaag 360
 ggccttctgca atgaaccctt 380

<210> 1675
 <211> 350
 <212> DNA
 <213> *Pinus radiata*

<400> 1675
 cccagctgag gctctctgag accaaggtga gattcagcca gtagtaagct atagattgat 60
 agttcagaga aaagactgaa aggcacaaac tatatagaca taacaacgga gagagcagca 120
 caggaaacag gtgtcataat ggctaggcct caaagataca gaggagtcgc tcagaggcac 180
 tggggatcat ggtctctcta aatccgccat cccttattga agaccagaat atggctagga 240
 acatttgaaa cagcagagga tgcagcacga gcatatgatg aagctgcaag gatgatgtgt 300
 gggccgagag ctagaaccaa ctcccatc aatccatgc acctccatct 350

<210> 1676
 <211> 262
 <212> DNA
 <213> *Pinus radiata*

<400> 1676
 aagtgaagctt catacttaac caataataac acctgtatag cttcacagca acagggcacc 60

atggggccgag	ctcttctgtgt	gataaaatgg	gagtaaaaga	aaggccccgt	gactctaacg	120
aagataaaat	actggtcgac	tacattacca	aacatggcca	tggcaactgg	cgctgactgc	180
ccaagcaagc	agggtctctg	cgatgtggaa	agaagttgtc	gcctgcgggg	gacgaattac	240
ctgaaacccg	acatcaaaaag	ag				262

<210> 1677
 <211> 357
 <212> DNA
 <213> Pinus radiata

<400> 1677						60
cgacaatggc	gcggaacggg	ttcgaaacgg	cgacgctcgg	cctcgaacgt	accgaggcgt	120
tcgcccggcg	agctgggggg	agtgggtgtc	cgagattcgc	gagcctggga	agagaaagcg	180
catatgggtg	ggatcccttc	aaacggcaga	gatggcggct	cgagcttaag	acgtgctgcg	240
gctcagcctg	aaggggaagat	ctgctttggc	caatttcccg	gattccgtcc	acacgctgcc	300
gcgccccctc	tctctgaatc	ccagagatat	ccagcttgge	ggctgcccag	gcagcccgga	357
attaacgcag	ccgatgggtc	ctaccgatat	ttcatctcgc	aaccgcaaga	tcaaaat	

<210> 1678
 <211> 354
 <212> DNA
 <213> Pinus radiata

<400> 1678						60
cacgaggcag	tatctaccaa	tgtcggggag	agacaggaag	cttgtttgtc	ttggtattcc	120
ttgggatgtc	gacactgaag	gtttacagga	ttatatgagc	aagtttggag	aactggatga	180
tgtgatgtgt	atgcggggtc	gtgcaactgg	tcgttctcgt	ggatttggtt	atgccacatt	240
ttcttcagtt	gaagatgcta	agaagcact	tgacagtgaa	catgttctaa	atggctcgta	300
actggaagta	aaggtgccta	cacccaagga	ggagatgaag	gtcctctcta	agaagattac	354
ccggatattt	gnggcaaaaga	attccccctt	ctgttacaga	ggatgcatcc	cgaa	

<210> 1679
 <211> 174
 <212> DNA
 <213> Pinus radiata

<400> 1679						60
gtccggggcg	tggagagcat	cagccttgga	gttacagacc	aggaaaaaac	aagatgggta	120
gatctecttg	ctgctccaaa	gaggggtcca	accgcggggc	ctggaccaaa	agggaggata	174
tgatctcttc	cgaaatcgtt	cgaaattcatg	gcgatggtgt	atggaaaaat	gttg	

<210> 1680
 <211> 221
 <212> DNA
 <213> Pinus radiata

<400> 1680						60
gttcattaaag	catggagcca	aagtcataat	cgacagcgtt	gcggagaaaag	ttggcaggaa	120
gcttgaggaa	tcactttctc	ccgctgtggc	aacctacgtg	cactgcgatg	tgagcaaaaga	180
agaagatgtg	agcgcgcgcg	tggatgtggc	catggataag	tatggccaac	tggaacattat	221
gtatacaac	gctggaacta	atgacagatt	tttggtgaag	a		

<210> 1681
 <211> 363
 <212> DNA
 <213> Pinus radiata

<400> 1681						60
gcttaggcgc	attaaggagc	aaaggaaggg	aaaatatcac	agcgacacag	caaaacagag	120
acagtcacaa	gaacaagccc	gaaggaaaaa	gatgtcccg	gcacaggatg	gtatactgaa	180
gtacatgctg	aaaatgatgg	aagttttgcaa	agcacaaagg	ttgtatatg	gtatcattcc	

tgaaaaagg	aagcctgttaa	gtggagcctc	ggacaatctt	aaagcatggt	ggaaggagaa	240
ggtcagattt	gatagggaatg	gccctgctgc	aatcaccaaa	tatcaagcag	aacatgcaac	300
acctggagca	aatgagagta	acatggttgt	ggctcctacc	cctcactact	ttcaggaact	360
tca						363

<210> 1682
 <211> 374
 <212> DNA
 <213> *Pinus radiata*

<400> 1682		
ctgatttgaa	gtgtctcattc atgaacaatc cgagcagcag ttaatgcataa aatgttgatt 60	
cgagggtctcc	gttattgcga gcaactaaag ggogattggtg ttacaatcaa atatcgagaa 120	
cgagaatgaa	tctgaagcct ctcgggaatgc tacaaattgg taatttggct cctgttagaa 180	
gagcattctc	atcacctaga gccctcagcag atgaagaagc tgctgcaaaa cgagctgctg 240	
ctgtagcaga	gacaggagcc ccaaccatat ttgacaagat cataaagaag gaaattccag 300	
caactattgt	ttagtaggat gcaaaagtgt tggcatttcg agatattaat ccacaggcac 360	
cagtcacat	attg	374

<210> 1683
 <211> 407
 <212> DNA
 <213> *Pinus radiata*

<400> 1683	
gccgtggctg	ttcccaggag agggagagcct cagctgtctc gatctggcct taaggggtta 60
cagaagaaga	atttcgaaga tgggtagatc ttcttgctat tcaaaagcaag gtcatagcgc 120
tgaggatttgg	acccttatgg aggatatgat tctctctgaa tacattcgaa ttcatggcag 180
tgatggatgg	aaaaatatcg ctaaacgcagc aggtaaaaatt ctaaatgcaa tttttattgc 240
aaaacgttaata	ctcatttgaga gggttaactaa gggggcagtt tttgtctgc aggtcttaaa 300
cgacgtggaa	agggttcgac attacgttgg ttgaactatc ttgcgccga cattaacagt 360
ggtaacattt	ctcctgatga ggaaggacctc attattagggt tgcattgg 407

<210> 1684
 <211> 361
 <212> DNA
 <213> *Pinus radiata*

<400> 1684		
gttcagagcc	ttttgcatct tcattattct tccgcctgtg aaaagatggg gagatctccg 60	
tgctgtgaga	aggctcatic taacaaaagg gccctggacta aacaagaaga tgaccgcctt 120	
atcgctcaca	ttcgagccca cggcggaagg ggcctggcgtt ctcttcccaa ggccgcaggg 180	
ctcgatgagat	ggcggaagag ctgcagactg cgaatggataa actaactgcg tcccgatctg 240	
aagcgtggaa	gcttcacgga agaagaagac gaactcatca tcaactcca ctcttcgtt 300	
ggcaacaagt	ggctctttaa tgcagggaaga ttgcccggac ggacggagaa cgagataaag 360	
a		361

<210> 1685
 <211> 340
 <212> DNA
 <213> *Pinus radiata*

<400> 1685		
caagagtaaa	cccgaaggaa tagaagggga agggagcctc ggcagcgttg ttctctctcc 60	
tctctctctc	tgcatctctc aaactcaaat acctctctctc tcacaatcat ggaaggcgga 120	
gtcgtctttg	aactctgtgca aaacccactg gatcgccctga acactggaaa tatggaccat 180	
gggtgtgccc	attacaggag acgatgtcgg attcgggccc ctgtgttgaa tgagatctat 240	
gattgtaggg	actgtcacaa tgaagccatg agccatctaa aggacccctt gctgcgccc 300	
gagctcccaa	aatacaaaat tgaacgggtt atttggcttc	340

<210> 1686

<211> 332
 <212> DNA
 <213> Pinus radiata

<400> 1686
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 aagaagaaaa tacaagatgg gcagatctcc ttgctgtcca aaagaagggc tcaacogtgg 120
 ggcttgagacc aaaaggaggg atattgattct ctccgaatac attcgaattc atggcgatgg 180
 cggatggaga aatatgccca aaagagcagg tcttaaacgg tgtggaaga gctgcagatt 240
 acgatggctg aactatcttc gcccgacat taaacgtgga aacatttccc ctgatgagga 300
 ggaactcata attcggtccc atcgcttct tg 332

<210> 1687
 <211> 347
 <212> DNA
 <213> Pinus radiata

<400> 1687
 gattgatcaa acacaaatc cgtaaaattg cagcgaaaa ccaaaattcc accatgggga 60
 ctgtggcgga agatggcagc aagggttaca aggcgtgaaa tccccatccc aaaaaggcgg 120
 tcgctctgtg gctgggtggac atgggtgaga aactgggtgg tgaaccttct gcgtgtgata 180
 gttcgaagaa gccctctgcat ttctcttttg ggaactctgc tccagtctcg gaaactgcgc 240
 ccaaatcgca cctgctctgt gttgggcaac ttctagtgtg ctggatgga gaggttcgtg 300
 gcgctgggtc ccaatccgaa attcgccacc gtactgtgct atcactg 347

<210> 1688
 <211> 354
 <212> DNA
 <213> Pinus radiata

<400> 1688
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 cagtagggag tgcactggaa ttctcatctg ccacaactgt ggtggccgtg gatcatgttc 120
 atacgaatgc cccctcggtc gtgtgatgct gcgggacatg cgcaggcattc agtgggtgga 180
 ttctcacacc accctgactt tttagattat ctgattttga caaatctatt ttgaatttgg 240
 aagttctttt tctgagtagt tagatcagta gacctgtcgt atcagttatt atacagtttt 300
 cttatactag tctcttactt caagactggc tgatatactt ctattttcat atga 354

<210> 1689
 <211> 348
 <212> DNA
 <213> Pinus radiata

<400> 1689
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 tcatatggtc atcggggaagt tctagtcttg tattcagcac taagcacttg tgatccaggg 120
 gatcatctgg aaagtataaa gaaatgcaag aattcgaaaa tgcgatgctc agtgggtgga 180
 ttatctcgag aaatttatatt ttgcaaacac ctctgtgagg agacgggagg attctatttc 240
 gtggcactgt atgagtcaca ttcaaggac ctctgtcttg aacattgccc tccaccacca 300
 gccatagcag agtttcgagt tgctagcttg gtcaagatgg gatttctt 348

<210> 1690
 <211> 349
 <212> DNA
 <213> Pinus radiata

<400> 1690
 tgcataccat cattgtaagt gaggtgaaag gaataggagt gggattctta ttaagcaatg 60
 gaaggttacg ctgcgaataa cgatgcagaa ctctgagca aaaccttca agtggaaacag 120
 aagttgttct attctgatct caaggaaaac ccccgaggtc aataccttaa aatctctgag 180
 aagacctcgc gctcacggtc tacaataatt gtgcccattg gtggagtggc atggttcttc 240

gatctcttta	attattatgt	cgacggagat	gacgaggaag	ttttgagcaa	ggaattgcag	300
ctggatgcc	aggtatttta	tttcgatgtt	ggggtgaata	aaaggggtc		349

<210> 1691

<211> 339

<212> DNA

<213> Pinus radiata

<400> 1691

ctgaagtgcc	gtcgattgtt	cgaggagata	gcgttttcga	agttcgttgt	tgagtattct	60
cgcgagactg	tagaatttta	gggttgtttt	ccacaaacgc	acttttcccg	acttcaaatc	120
ttgatattga	agtgacatgg	ccggcgagaa	aagaaagatt	aatagaatag	ctaacgcttc	180
ggccaggcag	gtcaccctcg	cgaagagcgc	gagggggctg	ttcaaaaaag	ctcaggagct	240
atcgatttta	tgcaagccg	atgtagccct	cctcgttttt	tcttcaactg	gaaagctgta	300
ccagtactcc	agctccagca	tgaaaaatgat	attggacca			339

<210> 1692

<211> 380

<212> DNA

<213> Pinus radiata

<400> 1692

gaaaccatga	gggtcttgcc	acaagggttg	ttgagcccaa	acctgaatgg	tcagattttc	60
gtgagggcag	ctttggacat	ggggaactta	gagttgccaa	tgcaacacat	gcacattgga	120
gctggcatcg	taatgatgat	gatgagccag	ttaaatctga	tgaagtttgg	atcaataatc	180
ttagccaatc	aagagaatgt	atagaaagta	ccgactacag	tggaaaggaa	atactaatgt	240
caacttgagt	atatgtcttg	agggagaagt	gatctaactg	taattgccaa	ggcaaaaacac	300
tgagtgtgag	ctcatgcacg	gcaatgaatt	tatggttcag	tgtttagtgt	tatggaagta	360
tattattcat	tagacatgca					380

<210> 1693

<211> 442

<212> DNA

<213> Pinus radiata

<400> 1693

ggatatcate	agctgtccag	tttgtcctaa	gagactacag	aagaagaata	tagaagatgg	60
gtagatcccc	ttgcccccca	aaagaagcgc	ttaaccgtgg	ggcttggaac	ggcatggagg	120
atcagattct	caccgagtag	attcgagttc	atggcagctg	tggctggaaa	gatattctcca	180
aaagagcagg	tcttaagagg	tgtgcaaaaga	gttgcagatt	gcgttggtct	aactatcttc	240
gtcccgatat	taaacgttgt	aacattttct	ccgaggaaga	agagctcatt	attcggttgc	300
atcgccctct	tggaatatcg	tggtctctga	tagcaggagc	actgcctggg	cgaacagaca	360
acgaaatcaa	gaattacttg	aacactcata	tgagcaagaa	gccattggctg	tcaattggagc	420
aatctcagtc	caatctctcg	ca				442

<210> 1694

<211> 351

<212> DNA

<213> Pinus radiata

<400> 1694

tttttttttt	tttttcccta	ctcccacett	tttgttcgtc	tgcgcatggg	tttgtatctg	60
atgtcaaaat	tgtctgcaac	gcattgctgat	gttgatctcc	atgcccagact	acaacatctg	120
cacaaatagg	aagttaagaa	taaagcgaaac	aataaaaagt	cgagccatta	gcagtaaaat	180
ggcagatatac	ctctccgatg	attattctgtg	gaggaagat	ggacaaaagc	caatcaaggg	240
ctcccacatc	ccaaggggct	attataagtg	cagcagcagt	agaggttgct	ctgcccgaa	300
acatgtggag	cggtgtccag	atgaaccttc	catgcttatt	gtgacttatg	a	351

<210> 1695

<211> 304

<212> DNA

<213> Pinus radiata

<400> 1695

caaggcgtga	aatccccatc	ccaaaaagg	cgccccctcg	tggctggtgg	acatggtgga	60
gaaactgggt	ggtgaaactt	ctgcgttgta	tagttccaag	aagcctctgc	atttctcttt	120
ggggaacttc	gctccagtct	cggaactcgc	ccccaaatcg	cacctgctcg	ttgttgggca	180
acttctcagt	tgtctggatg	gagagttcgt	gcgcgttggg	cccaatccga	aattcgacc	240
ggtagctggc	tatcactggg	ttgatggaga	tggaaatgat	catggtctca	gaattaaaga	300
tggt						304

<210> 1696

<211> 371

<212> DNA

<213> Pinus radiata

<400> 1696

gcgtggatgt	acaacgaata	tggatccata	gaggtcctgc	actttgggga	tttccctgtt	60
ccaaagcctg	ggttaggcca	gctcttaatt	cgagtcgagg	ccgctgctct	taatcctgcc	120
gactttaaga	gacggaaagg	cttattaaga	aacgcggatt	ccgattttcc	gactgtgcc	180
ggctgtgata	tgtcaggagt	ggtgggtggaa	attggtgatg	gtgtctccaa	gttcaaggcc	240
ggtgacgaga	tatacagcaa	catccagaat	ttcgacgacg	ggaggccaaa	gcagtcgggg	300
actctcgccc	agtacacagt	ggtggaggaa	ttcctggtag	gcgcgaagcc	cagtaattta	360
tcatttgagg	a					371

<210> 1697

<211> 523

<212> DNA

<213> Pinus radiata

<400> 1697

ccctcatgga	tatgttggag	ttgattcgcc	accatttgct	ggaagtggag	gacaatatag	60
atatagatat	tgatatttag	ggaacttcgc	cgttgttctt	cacccccact	gccattgaga	120
gtggcgatata	tattaatat	gatgatcatg	acgatgatac	ccgagcaaat	gccagagcga	180
ccaggcgctc	atgccaaaat	atcgtcagca	gaacaacatt	aaaagagaa	gcgaatgaat	240
ttacacaaca	gatccattct	tcattctctc	caagatgctc	agttatgaaa	ggagcagagg	300
cgtttcagggt	aaagcaacaa	ccacgggagc	gggagaatgg	aaagaagaga	gagacaagtg	360
ccaggaaata	cagaggagtg	aggcgggcgc	cgtagggaaa	attcacagca	gaaatcagag	420
attccgcgcg	gaagggtgct	cggttttggc	ttggaaacttt	caacaccgtc	gaagaggctg	480
ctcatcgata	tgaccgcgct	gcctacagat	tccgtggagc	tcg		523

<210> 1698

<211> 471

<212> DNA

<213> Pinus radiata

<400> 1698

cgcgatagcc	gagagcacc	ttatctctc	caactctgtt	catacatgca	acaagctctg	60
gcagcagcaa	tggcgcccca	gactatcatc	gctgcctcta	tggcatctcc	tctaacatta	120
tcaaatggcc	actatcgctt	tcagtccgag	ttcaaggggg	ccgtggttcg	aatcccgacg	180
agggcatatt	ctctcgccgt	tgacgcccgg	gcgctgacgc	tcgtcgacga	ggccaagaag	240
gcgcttgccg	tgctcaagg	gaattcacag	gtcgaggggt	ttgtcagctg	ctcgacggaa	300
gacacggctc	ccacaacagt	gaaggtccgt	ttgacaggac	tgactcctgg	gaagcatggc	360
tttcatctac	atgagtttgg	tgacacaacc	aatggctgca	tatcaacagg	agcacatttt	420
aattccaaaa	aattgacaca	tggtgctcct	gaggtgatg	tacgccatgc	g	471

<210> 1699

<211> 483

<212> DNA

<213> Pinus radiata

<400> 1699

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cttcctgggtg ttgttgctgt gatttctctg ccattctgtg ttgggtttat ggttttaget      60
tcactacaag cctttagcaa gcttcacaaa taagctttgc agtaggatgt ctctctcccc      120
gtcatattcc atgtttccca attcaggaat gggcttaaat ccctcagtga catcttcaaga      180
accctctagt caggtctccg gatcgatccc ccatcaatat tcaggctccg aggaagacc      240
taaacctgacg atcgatgaaa gaaagcagaa gagaatgctt tctaacagag aatctgcaag      300
gaggtccagg atgagaaagc aacagcatctt ggtatgaatt agagccgaag cagctcatct      360
cagagcgagag aacagtcata tgctaacaaa attcaacatt gcttcacaga aatacatgca      420
gctggaagaa gagaattctc ttctgaggtc ctatgccatg gatttaagcc tcaagctgca      480
gtc

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<210> 1700

<211> 442

<212> DNA

<213> *Pinus radiata*

<400> 1700

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ttttttttga atagaaaaaa tataaattagg tacttttccct tagaatgttg cagataattg      60
cattttacttt cctaagaagc cattgtctcaa ctttagacca tgatgtcgag ttactgcmaa      120
gactcttgaca aacctaacca atcacttata cctactgtca agtaaatatg taacaaatat      180
caattttcaa tcaaaagggtc cattaaagagt tttaaccaac aaggtgaagg caatgaatct      240
ctagatctca ctaacctaat tctgctctac ctaccaagct agcagctctgg cttgaaatta      300
gcagaaacttc caatggttat tacaatttac acatgtcaca aatgtagtca taggttcac      360
tgcaactcttt gtttgcaact gatagtaagt acacttccgc tggccacatt taccacactt      420
gaattggtct gttgtagctt ta

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<210> 1701

<211> 316

<212> DNA

<213> *Pinus radiata*

<400> 1701

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ctaaattcat atgctggaca tacgtgatgt catggcagggt gttcttctgt taaaggaggaa      60
aagtttggcc aaagatatct atttcttaca gaatgcagaa ggttcagggtc tggctccatt      120
tgactgttgg ctatgctgag gagggatcaa acaaatggct ttgcgcattg agaaacaaca      180
ggagaatgca aggaaaattg cagaattttt gtcactctcat cctctgattg agaaagtata      240
ttatgctggc cttctagacc acccaggcca caatttaccat tttttgcagg caaaaggagg      300
aggttcagtt cttagc

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<210> 1702

<211> 329

<212> DNA

<213> *Pinus radiata*

<400> 1702

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ataatgtcat attttatct cagagacttg aactattttg atgttgtaat tcatattggt      60
tgacatgatt gatattgaca tatgtttacat ggtattagca tgaggatggt gatgtttgac      120
cttattttagg ttgttcgtagg ttgtaaaaaa aaaaaaaa aactcgagac tagttctcct      180
cgtgccgaat tcggccagag ggaacagctg aggaagagca agaagagggt ttttgcgtgt      240
aacaggcggg ttgggctgac gggctttaag tgccgctgtg gtgacctttt ctgcgcctcag      300
caagggtact ctgatatgca tgactgctc

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<210> 1703

<211> 325

<212> DNA

<213> *Pinus radiata*

<400> 1703

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ctcgtgccct ggtgcaaga ttgttataag aggcaagggt ttctgtcaagg aaggtagatt      60
acagcaaaaa cgtgatctga aacctgatcc atccgagAAC gaggacttgc atgttttgggt      120
tgaggcggag acacaggatg ctttggaaaa agctgccgcg atggtggaga anctgcttat      180
gctgtgtgac gagggtttga atgagcacia gcgggcgcag ttgagagagc ttgcgcgact      240

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taatgggaca atacgggatg atgaattctg caggctttgt ggtgaaccaa gtcataaggca 300
 atatgcttgc cctacaaggc ttata 325

<210> 1704
 <211> 453
 <212> DNA
 <213> Pinus radiata

<400> 1704
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 caatcaaaac catggcgctct aacgggacgc ttaatgcagg cactggcgct gttgggtgac 120
 tgaccaatgt tggagatcga cgattggagg ggaagggtgc aatagtaacg ggcggggcag 180
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 cttacgtgca ctgcgatgtg agcaaaaagc aggatgtaa ggcagcagtg gatgtggcca 360
 tcgacaagta tggctcaactg gacattatgt ataacaacgc tggaaactaac gacagcgctt 420
 tggtagaagc cgtagcagag tatgatattg agt 453

<210> 1705
 <211> 242
 <212> DNA
 <213> Pinus radiata

<400> 1705
 gaaaagggtca attatcctgt gttgctacgg aaatctaaat attcaaggtt atggttatatg 60
 ccagataaga ttttctttac tccaaaagct gtcatacaac tggattttca ctgctcctgaa 120
 tcaaacctgt caccagaagc agtaactcta acttgatttt tactgcatt attggtggat 180
 tattttaaagc aatacgggtga ctataagtgg atacagtcac aagatgagaa ttttactgga 240
 ga 242

<210> 1706
 <211> 358
 <212> DNA
 <213> Pinus radiata

<400> 1706
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 catattcaat ctggtttggc gattgaacta aagatttttg tccgggtgat ttttggatta 120
 aattcaaggc cgacgaacgt gaggtgctag ggctttttaga gtttggatgg aaccatgga 180
 catcgtttgc aagtcacaagc atgacgtctc gcttcccaa gcaaccatgt ttaaaattat 240
 aaaagagat ctgcctccag atgttcgtgt tgcagaagat gctcaggact tactggtcga 300
 gtgtgtgtgt gagtttatca atctaataac ttcagaatcc aatgaagttt gtggcaga 358

<210> 1707
 <211> 334
 <212> DNA
 <213> Pinus radiata

<400> 1707
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 atcgaacttc cggcttgggt gcaagaagct tttgcgtttt cggtttcaga ttaaagcaat 120
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 cagcaggtcg aaggtctaga gagcttttat gctgaacata agtatccttc ggaagctatg 240
 aaatcacagt tatcagaaga actgggatta acagagaagc aggtacaagg atggttctgt 300
 cacaggagcg ttaaggataa aaggctcatg aagg 334

<210> 1708
 <211> 288
 <212> DNA
 <213> Pinus radiata

<400> 1708
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 tctctctaca atcatggaag gcggagtcgt ctttgaatct gtgcaaaacc cactggatcg 120
 cctgaacact ggaaatatgg accatggttg tgcctcatc aggagacgat gtcggatctg 180
 ggccctctgt tgcaatgaga tctatgattg taggcactgt cacaatgaag ccatgagcca 240
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<210> 1709
 <211> 406
 <212> DNA
 <213> *Pinus radiata*

<400> 1709
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 aaggaggttg gagacaaagt ccggaagggg ccattcact tttgaacaa tcgcgctctt 300
 tcgggagcgc ggccaccatg aacttgtgct ccaagtgtta cagagagctt aacgcgcaac 360
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<210> 1710
 <211> 434
 <212> DNA
 <213> *Pinus radiata*

<400> 1710
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 cgctccagag catcacttaa tgcacagagt gtacctcttg aggaattgac cttagattcg 180
 gatttgtgaag ggcaacttta aaatgatttt gcttctctt caggatcttg aaacaccttg 240
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 ctatttgtct ctgagatgtc tcttagggga ccgtgccttg aacctctcgt gtttctctaa 360
 ataagtctc aattcagtc acataaggca gctcaagttc agcctcaggt gcaaacatca 420
 attagtaaat agat 434

<210> 1711
 <211> 387
 <212> DNA
 <213> *Pinus radiata*

<400> 1711
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 ggtcgtctag tgactctctc agggggacgt gctgcagagg aagtgggtata ctacaggtcgt 120
 gtttccactg gtgcacttga tgatataaag cgtgcaacag atatggcata caaagctgtc 180
 gctgaatatg gtcttaacaa gtccataggt ccaatttcat tggcgacttt gctcgtgtggc 240
 ggctcttgat agtctggagg agcaatgcca tggggcaagg atcagggaca tatggtagac 300
 cttgttcaaa gagaggtgaa aattttgcta caatcggtt tgacaatggc actcctctgc 360
 atacgtctta atccactgt acttga 387

<210> 1712
 <211> 440
 <212> DNA
 <213> *Pinus radiata*

<400> 1712
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 tccaatcaaa aaccatggcg tctaacggac agcttaatgc aggcactggc tgtgttggtg 120
 atctgaccaa tgttggagat cgacgattgc aggggaaggt tgcaatagta accggcgggg 180
 cagcgggcat aggagaagcc attgttcagt tgttcattaa gcatggagcc aaagtcataa 240
 tcgccagcgt tgggagaaa gctggcgaaa agcttgagca atcccttca cccgctgtgg 300

caacttacgt	gcactgcgat	gtgagcaaa	aagaagatgt	aagcgcagca	gtggatgtgg	360
ccatcgaaaa	gtatgggtcaa	ctggacatta	tgtatacaaa	cgctgggaact	aacgcagact	420
ttttggtgaa	gagcgtgaaa					440

<210> 1713
 <211> 446
 <212> DNA
 <213> Pinus radiata

<400> 1713						
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aagaagaaaa	tacaagatgg	gcagatctcc	ttgctgtctca	aaagaagggc	tcaaccgtgg	120
ggcctggacc	aaaaggggag	atatgattct	ctccgaatac	attcgaattc	atggcgatgg	180
cgctgtgaga	aatatgccca	aaagagcagg	tcttaaacgg	tgtggaaaag	ctgtcagatc	240
acgattggctg	aactatcttc	gccccgacat	taaacgtgga	aacatttccc	ctgatgagga	300
ggaactcata	attcggctcc	ntcgcttct	tggcaatcga	tggctcgctta	tagcaggaag	360
attaccagg	cgaacagaca	acgaatacaa	gaactactgg	aacactcata	tgagcaagaa	420
gctgcttcca	ttgaacgaat	ctcaac				446

<210> 1714
 <211> 519
 <212> DNA
 <213> Pinus radiata

<400> 1714						
attcatttcc	gtgtaagttg	caacgcctca	ttgtttcttc	aacctagtga	gtaacattcg	60
tgaattcggt	atgcaagtag	cttgcgggaag	ggcacttcta	tcatgttatt	cttattccga	120
gcactgtgca	gctatatgat	ggacctgtgt	tttcatcact	ggctcacttc	acctgtttga	180
gtatctgcca	tttttggag	tttggtgaag	cttgggtaaa	taccagagac	acaaagaaac	240
cgctctgtgag	cggagtgat	cgaactatt	tacaatgcc	cgggtgaaat	tattttccag	300
gaacttcagt	gacatgggtg	cagcattacc	ggctgcaaa	ttagatcggc	tttatgatag	360
tcatttcatt	tgcgaagcgg	ttctgaggtc	tctgactcct	gtgccaaaag	aatatgtatt	420
gcaactatta	tataatgagc	ttcgggtgcc	tgccaaatca	ctggagggaat	gggtttcttc	480
agatggcctg	ctaaagcaca	aagcagcaat	tgatagggt			519

<210> 1715
 <211> 162
 <212> DNA
 <213> Pinus radiata

<400> 1715						
cgcccgagc	aattttgctt	ctctgctaaa	cgatgggaag	agcgccttgc	tgtgccaaag	60
gtgacagaa	caaggagacc	tggaccaagg	aagagatga	caggcttacc	caatatattc	120
aggtcatgg	agaaggatgc	tggcgttctc	tcccacagg	cc		162

<210> 1716
 <211> 481
 <212> DNA
 <213> Pinus radiata

<400> 1716						
gttacagtag	tgcgtacaaa	attccagtag	cattgacttg	caatctactt	ttatggagta	60
ggtagggctc	cgtgaaattg	cgcatgtcat	gaatgtgctc	gtctgtaagt	ggctgtctta	120
cgccggcgaa	ggttcggacc	ctgtgggtgg	ggtagaattg	gtgtaagagg	cgccgatctc	180
cgatcggaag	gtacacagaga	tcattaattg	cgatgccgat	gccgtttgct	gtgaattgtc	240
ctggctgtca	gacgccactg	cagctaaccg	cggggggcgaa	gtcgatacgc	tgtgctctgt	300
gtcaagcggg	cactcatgta	gcggaacatc	acggcgatag	tccgcctcga	ggttaccgcc	360
accagcagcc	attggctcct	ccgcgggtca	gtccccagca	ctattcgccc	gctccgcctt	420
cttcccacgg	caggaagaag	gcggctgctc	gcggcatttc	ttacagatat	tcccagcagc	480
a						481

<210> 1717
 <211> 546
 <212> DNA
 <213> Pinus radiata

<400> 1717
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 ctgcactgtt tgcggggata tgattccaaa aagtcgttct atggaacacc accaggatac 120
 ccatgctcct gtatcttgtt cacagtggtg cgaatccatt gaactggaat tactagtcat 180
 ccatgagcgt gacaagtgtc ttcatagaat tgttacatgt ggttattgcy agtttccact 240
 gccagctgtt gatcttgata aacatctgaa catctgtggg aatagaacag agtattgtaa 300
 tccgtgcagc aagtatgtga gattgtgtga aaagctagct catgatttac agttccatga 360
 aggaatactct gatgacactg gggattcttc aagagagcag caccggggaaa ataatacagc 420
 ctaccacgca gcagaactctg ctccggaggt tcttagggaa cggccacgag atacctcgca 480
 gctgctgttg cttgtcacat tagcaatcac aggaattgac ataattatag gatcatttgt 540
 tcttca 546

<210> 1718
 <211> 631
 <212> DNA
 <213> Pinus radiata

<400> 1718
 tataaacgcc tcttcttata ctagtgcctt tatcggttcc attcaaacctt gctcacggat 60
 tccgaccctt ccggctaaag ctgctgcatt tctgtgtgta ttgaagatgg gtagatctcc 120
 ctgctgtgaa aaagctcata caaacaaagg ggcgtggacc aaagaagagg acgatcgctc 180
 catcgcccaac attcgaactc acggcgaaagg ttgctggcgc tcgcttccca aggcgcgagg 240
 gctgatgcgc tgcgggaaga gctgcaggct ccgatggata aactacctgc gtcttgatct 300
 gaagcgtgga aactctccag aagaagaaga cgaactcgct atcaaacctc actccctact 360
 cggcaacaag tggctcttta ttgcaggcag attgcccggt cggagcgaca acgagataaa 420
 gaactactgg aatactcaca tcaagagaaa attgtctaac aggggactcg acccccagtc 480
 ccatcgcccc ctccggccagc cgacacacag caacacgacc tgccccctctc tgcggccctc 540
 cgagcacgaa attctgtgtg tccagagccc aagaacgccc gagatagcag atttctttca 600
 atacgagcgc tctgaagact cgccgatgga a 631

<210> 1719
 <211> 561
 <212> DNA
 <213> Pinus radiata

<400> 1719
 gaacgaacgg tgaagatata cagaggatct ctcaacggct tcatctccgt cgtcgtctct 60
 cctccttcca tctccagcgt cagatctgat cttatcaaa gaaagcccta aatccctcca 120
 gctttccaa ggcgggttct gttgctgtat cccaggtccc tggctcatatg gcggaagctg 180
 gcagcccggg cagccaggaa agtctctggt ccggggaaaca aagccccagc tccagcgtgc 240
 gggagcagga caggttctcta ccatcgcca acattagccg catcatgaag aaggcgtgct 300
 cggccaaagg caagatcgct aaagacgcca aggagaccgt gcaggagtgt gtctcggaat 360
 ttatcagctt catcaccagc gaggccagtg acaaatgcca gcgagaaaag aggaagacaa 420
 tcaacggcga tgacttgctc tgggcatga gcacgctagg gtttgaagt tatatcgagc 480
 ccttgaaggt ttacttgctc atgtacagag aggcggaggg tgacaataag ggaatctcaa 540
 aatctggagt agaccaatat g 561

<210> 1720
 <211> 497
 <212> DNA
 <213> Pinus radiata

<400> 1720
 ttatttttga gcatcgagag gcagcagcta cggactaatc gatccatcat agccattttt 60
 aatttcgctg cccaatcgaa ccatggagtc taaggagacg gctaattccat ctgttcttcc 120
 tgtttgtaat ctacgcaaga atggagagcg acgattggaa gggaaagtgt ttatagtaac 180

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gggcggggca gcgggcatag gagaagccat tgttcagctg ttgcgaaagc acgggagcgaa 240
agtataatc gcagacgttg cagagaaagc tggcagaaag ctgcagaaat ccccttctcc 300
agcatcgcca acttatgtgc actgtgatgt cagcaaaaga gaagacgtga gcgcgctgtg 360
ggatctggct atggataagt atggtcaact cgacattatg tataacaacg ctgggaactaa 420
cgacagcttt ctggtgaaga gcgtggcaga gtatgatgat gagcaattcg atcgagtgat 480
gaacgtaaac gtgaaa 497

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<210> 1721
 <211> 394
 <212> DNA
 <213> Pinus radiata

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<400> 1721
aataaattgg gttgcaaacg ttccagttg tttccagca ttgaggtggc tgagacttga 60
agaaagtgtg caacaatttg ctgtctttat gttgtctcaa gtcgactttt ccagagaagc 120
tgacacactg aaccgctttc ttacaattt tgcgaggtgg aaagatgtgt catttccata 180
gcctttgtac ccactttgtac acccggcagt tttggtggag acttatgaac aaggcgagag 240
tgtggcacgc tatgttgatc agccagaagc aaaccatagt tttaatagat cacttgcctca 300
cactggcacg catactctcc tcaagatgct actggtggat aatttcatcc atgcagatat 360
gcactctgga aatatatttg ttcgaatggg acaa 394

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<210> 1722
 <211> 394
 <212> DNA
 <213> Pinus radiata

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<400> 1722
taaggctaa gacaccagag gaggtgaagg agaaaaaaga aacaatggct ggaataggac 60
cgattagtca ggaattgggaa cccgttgtca tcaggaagaa ggctcctaac gctgcagcca 120
agaaggagca gaaggctgc aatgctgccc gtcgaactgg aggccttatt gaaactatca 180
agaaattttaa tgcaggatca acaaaagcag cctcgagcag caccaccttg aacaccaaaa 240
agcttgatga tgagacagaa gttctcgctc atgaaaagat ttcatcagat ttgagacaaa 300
acataatgca agcccgctta gataaaaagt tgacacaagc ccagcttgca cagcaaatca 360
atgaaaaacc tcagattatt caagagtacg agtc 394

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<210> 1723
 <211> 317
 <212> DNA
 <213> Pinus radiata

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<400> 1723
gattctctct ctctctctcg gggctctctt ggtgaaatcg tccccgagg agggaggctg 60
agggcaggcg tcggctcgcg tgggttcggt tcggcaggag ttatctcagg gttttctctc 120
tgctttctcg cgctctcgga ctggggctta cagtacacag atctggaaaa tggcgctaca 180
ggagagctca aaaaatcgag aggaaggagg tgggagacaa gtgccggaag ggccatttca 240
ctgtttgaac aactgcggct tcttcgggag cgcggccacc atgaacttgt gctccaagtg 300
ctacagagag cttaacg 317

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<210> 1724
 <211> 265
 <212> DNA
 <213> Pinus radiata

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<400> 1724
cggattccga ccttccggc taaagctgct gcatttctgt gtgtattgaa gatggggaga 60
tctccctgct gtgaaaaagc tcatacaaac aaaggggctg ggaccaaaga agaggacgat 120
cgccctcatc cccacattcg aactcacggc gaaggttgct ggcgctcgct tcccaaggcc 180
gcagggtcga tgcgctcgcg gaagagctgc aggcctccag ggataaacta cctcgctcct 240
gatctgaagc gtgaaactt ctcag 265

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<210> 1725

<211> 284
 <212> DNA
 <213> Pinus radiata

<400> 1725
 caagagtaaaa cccgaaggaa tagaagggga aggaggcatc ggcagcgctg ttcctctctc 60
 tctctctctc tgcatttctc aaactcaaat acctctcttc tcacaatcat ggaaggcgga 120
 gtcgtctttg aatctgtgca aaaccaactg gatcgctga acactggaaa tatggaccat 180
 ggttgtgccc attacaggag acgatgtcgg attcgggccc ctgtgtgcaa tgagatctat 240
 gattgtaggg actgtgcaca tgaaaccatg agccatctaa agga 284

<210> 1726
 <211> 308
 <212> DNA
 <213> Pinus radiata

<400> 1726
 caaaccccca agtgagcttc atatctaacc aataataaca cctgtatagc ttcacagcaa 60
 cagggcacca tgggcccagc tctttgctgt gataaaatgg gagtaagaa aggccctctg 120
 actctagacg aagataaaat actggtcgac tacattacca aacatggcca tggcaactgg 180
 cgtgcactgc ccaagcaagc agggctcctg cgatgtggaa agagtgtgct cctgcggtgg 240
 acgaattacc tgaaacccga catcaaaaga ggaatttta gtccagaaga ggaagatcaa 300
 attattaa 308

<210> 1727
 <211> 338
 <212> DNA
 <213> Pinus radiata

<400> 1727
 gacgagcggt tggtcattaa gcatggagcc aaagtcataa tcgcagacgt cgcggagaaa 60
 gctggcagga agcttgagga atcaactttct cccgctgtgg caacttaagt gcactcgat 120
 gtgagcaaa gaaagatgat gaccgcggcg gtggatgtgg ccatggataa gtatggccaa 180
 ctggacatta tgtataacaa cgctggaaat aatgacagct ttttgggtgaa ggcgctggta 240
 gagtatgata tggagcaatt cgatcgatg atgaatgtaa acgtgaaagg agtgatgcac 300
 ggcattaaag ccccgcccg cgttatgatc ccgaggaa 338

<210> 1728
 <211> 350
 <212> DNA
 <213> Pinus radiata

<400> 1728
 gcacgaggtt ttaacatctt ttgttgatat ccagaggctt gatgatgtga aaaatgccat 60
 aacaccatct accaaggttt tgtattttga atctatctca aacccaactc tggcagttgc 120
 agacatccca tctctgtctg ccatgtctca tgagaaaaat gtcaagggtg tggttgataa 180
 taccttttct cccatgatca tatccctgc aaagcttggg gctgatgttg ntattcacag 240
 catttcaaaa tatatcagtg gaggtgtcga tgttatagca ggagcaatat gtgggctctg 300
 agatctgata aattccatga tggatctcca tcagggaacc ttgatgctct 350

<210> 1729
 <211> 333
 <212> DNA
 <213> Pinus radiata

<400> 1729
 ccagtcgatg gtttcaagtt agttagtcca ataaagcaga gatgggtcgt gctccatgct 60
 gcacaaaagt tggctctcaac aaggagcat ggtctgccga agaggatagt cttctgggaa 120
 gatattatca aactcatggt gaaggcaatt ggaggtctct gcccaagaaa gcagggtctg 180
 gaagatgtgg aaagagctgc agattcggtt ggctaaacta tcttcggcca tgtatcaagc 240
 ggggaaatat tacacaagat gaagaagaac ttattatcag aatgcagctc ctctctggga 300

accgatgggc gataatagca gggagagtcc ccg

333

<210> 1730

<211> 508

<212> DNA

<213> Pinus radiata

<400> 1730

ctnctgcccga	agaaatctga	atcgtcgcgt	tctgtggtcga	caggaagcca	cagtgggcgg	60
cctgagaaac	tggttctggg	ggtcggggagt	gtcaagattg	tgacgggtggg	cggaccagcg	120
cttagtttgt	gttgggtggtc	ggcattagaa	ggggcagagag	gggcttttca	gtgcatggga	180
ttatgggcaa	cgaaggcgca	gcattcgatgc	ggctatgggg	cgacgataat	aattccatga	240
tcgaggtttt	catggggaa	ctcgattact	cttactccac	cttctggaa	ggcatcgatg	300
ccaatccctc	ttcgtaccc	tcgcccgcca	cttcccgctc	tctgcgcgag	tggtgtctatc	360
ggcagccctc	tcaatcagga	cacgctcgag	caacgcttgc	tggcgtttgt	ggagggagcg	420
gctgagtgct	ggacttatgc	catattctgg	cagttgtcga	gcgatgccag	cggcggtctcg	480
gagcttgctc	ggggcgacgg	gtactaca				508

<210> 1731

<211> 411

<212> DNA

<213> Pinus radiata

<400> 1731

cggagtga	tcatttgctg	ccgtcactgc	tgccaaggtt	tgttactgtt	agattttgtt	60
atancggaca	atggcttcaa	cagacataga	tatgattccc	gtgccctctg	ggcaggggtc	120
cagctctcaa	gcgggaccaa	cgcttccac	caagaaggcc	aaacgtttcg	aaatcaagaa	180
gtggaatgct	gtagcccttt	ggcgctggga	tattgtggtt	gataatttgt	caatttgcag	240
aaaccacatc	atggacctct	gtattgagtg	tcaggcaaat	caagcaagtg	caacaagtga	300
agaatgatct	gttgcatggg	gtgtttgcaa	tcacgccttt	catttccatt	gcataagctg	360
gtggctcaag	acacgacaag	tctgcccat	agataataag	tgagtgggag	t	411

<210> 1732

<211> 390

<212> DNA

<213> Pinus radiata

<400> 1732

cgaaactcga	atcgatatgc	tttgtggccg	gttcaaatat	ttgagctggc	ttagcttctc	60
tggttcagaa	atggcgggact	aaagtaaatg	tgtgccccga	ggctctggtg	tcgaatctcg	120
ttggcgtgaa	aggctcaaat	ttctctctga	gtttcattga	ttctgaaaaa	ctggcatagc	180
tatggcgatg	agcaatggga	gattgtgtga	agatttggat	aggattaaag	ggcccggtgga	240
gccccaggga	ggaacgctcg	ctgcagagggc	ttgttcagaa	atacggggcg	aggaacttga	300
ccctgataag	taagggaatc	ccggggcgat	ccgggaaatc	gtgcaggcta	cgggtggtgca	360
atcagctgac	cctcagctgg	agcacagacc				390

<210> 1733

<211> 277

<212> DNA

<213> Pinus radiata

<400> 1733

atttactgga	accattgtgt	gaataagtga	tgctgacct	gtgaactggc	cgaattcaaaa	60
gtggagatgc	ctcaagggtac	aatgggatga	aataatcagca	attgcacgac	cagagagagt	120
ttccccgtgg	aaattagAAC	cttcattaac	tccagtggca	gtgaatcctc	tgccagtagc	180
caggggcgaag	aggcctcggc	caaatatatt	acottcatct	tcgatttat	cagtgcata	240
caaggcccca	gtggattcta	ctcaggtgca	cagggttt			277

<210> 1734

<211> 221

<212> DNA

<213> Pinus radiata

<400> 1734

gttgcaggga	aggggttgccg	tgatcacagg	aggcgccagt	ggaatcggag	aggctaccgc	60
caagtgtgtc	gtggagaatg	gagcgaaagt	agtgtattga	gaccttcagg	acgaccatgg	120
aaaccgtctt	gctcaatccc	tcgctcccaa	cgccgtcttt	ttccactcgg	atgtctccaa	180
agaggcgac	gtttccgcgc	tgctggactt	ggcgctggag	a		221

<210> 1735

<211> 316

<212> DNA

<213> Pinus radiata

<400> 1735

tgggctgttc	ccaggagagg	agagcctcag	ctgtctcgat	ctggcgtaa	ggggttacag	60
aagaagaatt	tcgaagatgg	ttagatcttc	ttgctattca	aagcaaggtc	ataggcgtgg	120
gatttggacc	cctatggagg	atatgattct	ctctgaatac	nttcgaattc	atggcgatga	180
tggatggaaa	aatatcgcta	aacgagcagg	tcttaaacga	tgtggaaaaga	gttgacgatt	240
accgttgggt	gaactatctt	cgccccgaca	ttaaacgtgg	taacatttct	cctgatgagg	300
aggacctcat	tattag					316

<210> 1736

<211> 464

<212> DNA

<213> Pinus radiata

<400> 1736

cagcatcggt	gctcttcccg	gcagacctag	taagccgact	actgtaaat	tattctttta	60
gggttacaga	agaagaaaa	acaagatggg	cagatctcct	tgtgctcaa	aagaagggtc	120
caaccgtggg	gcctggacca	aaagggagga	tatgattctc	tcggaataca	ttcgaattca	180
tggcgatggc	ggatggagaa	atatgcccaa	aagagcaggt	cttaaacggg	gtggaaagag	240
ctgcagatta	cgatggctga	actatcttgc	ccccgacatt	aaacgtggaa	acatttcccc	300
tgatgaggag	gaactcataa	ttcggctcca	tcgctctctt	ggcaatcgat	ggctgcttat	360
agcagaaga	ttaccagtaa	gaacagacaa	cgaaatcaag	aactactgga	acactcatat	420
gagcaagaag	ctgcttccat	tgaacgaatc	tcaacccaag	actt		464

<210> 1737

<211> 361

<212> DNA

<213> Pinus radiata

<400> 1737

aaggaggcat	cggcagcggt	gttctctctc	ctctctctct	ctgcatttct	caaactcaaa	60
tacctctctc	ctcacaaatc	tggaaaggcg	agtcgtcttt	gaatctgtgc	aaaacccact	120
ggatcgctgt	aacctctgaa	atatggacca	tggtgtgtgc	cattacagga	gacgatgtcg	180
gattcggggc	ccttgttgca	atgagatcta	tgattgtagg	caatgtcaca	atgaagccat	240
gagccatcta	aaggacccct	tgctgcgcga	tgagctccca	agatacaaa	ttgaacgggt	300
tatttgggtt	ctctgtgaca	ctgagcaaaa	tgtaacgcaa	gtttgcgaaa	actgtgtgtg	360
t						361

<210> 1738

<211> 371

<212> DNA

<213> Pinus radiata

<400> 1738

gcttttctgt	ttcattcgat	ttcgattgtg	tagtgaagag	catggccgaa	caggtcttgg	60
aaggagatga	gccagtgatg	ctcgagaagc	atccttcagg	catogttccc	accctccaga	120
atatagatgtc	caactgtaac	ttggattgca	aattggacct	gaaagccatt	gctcttcaag	180
ctcgaaatcg	agagtacaat	cccaagcggt	ttgcagcagt	cataatgaga	ataagggaagc	240
ccaaaaactac	agcaactgac	tttgcatcag	ggaaagatgg	ttgcacaggt	gcaaaaagtg	300

aacaacagtc aaaacttgct gcaagaaagt atgctcgtat tatccaaaaa ttgggctttc 360
ctgctcattt c 371

<210> 1739
<211> 589
<212> DNA
<213> Pinus radiata

<400> 1739
gtctcagggg aacgaaaagt ggggaaggta caatatggct gcatggctca ctggaataaa 60
cactcttcgc atccagccct tcaaacctcc gccctctggc ccccatgatg cgaaggtgcg 120
catgaaggct tggggtatct gtggcagtgat cgtccactat ttgaggacat tacgggtgctc 180
ggactttatt gtaaaagagc caatgggtgat tggcatgatg tctctggtaa taattgagga 240
ggttggcagt gaagtgaac atctgggtcc tggtagccgc gtactttgg agcctgggaat 300
atcgtgttgg cgttgtgacc aatgtaaagg aggcctctac aatttgtgtc ccgagatgaa 360
gttttttgca acacctccgc tgcattggctc ctgggccaat cagattgttc atcctgcaga 420
tttatgttcc aagttgccag ataattgaag tctcgaggaa ggtgccatgt gtgaaccaat 480
cagtggtggg gttcatgctt gtccgcgtgc ttctgtaggc cctgagacaa atgtcttggg 540
aatgggggca ggtcctatcg gccctgtcac cgtctgtctc gcacgtgca 589

<210> 1740
<211> 473
<212> DNA
<213> Pinus radiata

<400> 1740
ctttgcgctg ttcgggttcg attcagggtt tcgggagcgt gttgtgtggt gttctgcagg 60
tcaggacatt gtaggcctgg ttatacaaga ttctgaagca aactctcgga gccctgaaga 120
atcggcgcaa atttcaacgg ccttataact atttgggaag cagtactctg gatttttttc 180
ccggaaacgga tcggagtgtg ggaagcgtaa taatcgctcg gaatttgtct tctgcaagat 240
aatattcaat taattctatt tcgaaggaaa tttagccgtg ataaggagat aatcaaaaga 300
agccggttga tttctccggg attaaaggat ggatcaagaa aactggaaca tcggagatga 360
tggcactggc tgccaagctc cagaagggca cactcttggc gccataact ccggcctttt 420
tggcagttcg gcaacgagaa acctgtgttc gaaatgttac agggatctga tta 473

<210> 1741
<211> 546
<212> DNA
<213> Pinus radiata

<400> 1741
atccaaataa tacaactatc tttgtgggtg gcttagaccc aactgtgaca gatgatatgc 60
tgagatcatt atttggctag tttggagaac ttgtgcattg caaaatacca gtggggaacc 120
ttgtgtgatt ttttcagttt aataaacaggc cttctgcaga ggaagcattg caaatgctgc 180
atggtacagt tcttggctcag caagccattc gtcttttctg gggacggagt cctgcgaaca 240
aacaactcgc tgggtggggt caaccccaac aaccagatcc aaatcaatgg aatggagctt 300
attatgggta cggacaagga tatgatgcag gttatgggta tgaccaccaa cctcaggatc 360
ccaatatgta cagttatgac ccttatgcat atggaatta tcagcagcag taacatttac 420
ttgggttccag gctctctctg ggaactggaa atattgggtt attcatagag ctgtctctgt 480
aaacagttgt ttttaacggg catccagtca acctatctat attaaattta atgaagagga 540
aagtct 546

<210> 1742
<211> 348
<212> DNA
<213> Pinus radiata

<400> 1742
agcaacctac gcttgagcag ccgaatgcga agcaccatc gattccgctt ccctcggcgt 60
tggtgccttc aagtatgcag gttccaatgg tggaaagcgt agcagcagcg gagacggcca 120
ttggaccgcg tccatccagc tcggcagaaac aggaagtgga gaaacatgaa caggacgaga 180

aggaacagct	gaggaagagc	aagaagaggt	gttttgcgtg	taacaggcgg	gtggggctga	240
cgggctttaa	gtgccgctgt	ggtgaccttt	tctgcgctca	gcacagggtac	tctgatattgc	300
atgactgctc	ttttgactac	aagaactgcg	gccgcctcgc	cattctca		348

<210> 1743
 <211> 300
 <212> DNA
 <213> Pinus radiata

<400> 1743						
cgaccatgct	tcaagtgtgt	tcatggtggt	tgtgtcatca	gccccctaaa	ttatgntgct	60
catgaaggca	ggctatatgt	taggcacat	agctctcaac	tttttaggga	gaaaggtaac	120
ttcagccanc	tttcaaaagg	aacacctaca	aaaggggtga	ctgataaact	agacacagac	180
nacaagtgat	cattcgggcc	agatttttgc	tgacagagtt	gtagtgtgtt	attgatcat	240
ttcatacatt	tgatatgcaa	gcctgtacaa	tatcctgtga	ctgttaaagg	cattcttttg	300

<210> 1744
 <211> 355
 <212> DNA
 <213> Pinus radiata

<400> 1744						
ggctcttccc	ggcagaccta	gtaagccgac	tactgtaaat	ttattctttt	agggttacag	60
aagaagaaaa	tacaagattg	gcagatctcc	ttgctgctca	aaagaagggc	tcaaccgtgg	120
ggcctggacc	aaaaggagg	atatgattct	ctccgaatac	attcgaattc	atggcgatgg	180
cgatggaga	aatatgccca	aaagagcagg	tcttaaaccg	tgtggaaaga	gctgcagatt	240
acgatggctg	aactatcttc	gccccgacat	taaacgtgga	aacatttccc	ctgatgagga	300
ggaactcata	attcggctcc	atcgctcttc	tggcaatcga	tggtcgctta	tagca	355

<210> 1745
 <211> 294
 <212> DNA
 <213> Pinus radiata

<400> 1745						
attgcttgaa	agagatgcac	gagcatcttc	aatttgcttg	tccagtgtgc	tccaaactcg	60
tctgtgatat	gtctaaattg	tgggagaaac	ttgaccgaga	gggtgccttg	actccaatgc	120
ctgaagctta	ccagaacaaa	atgggttgga	tcttatgcaa	tgattgtgga	gtaactctcg	180
aagttaattt	tcacattggt	gcacacaagt	gtcaaatgtg	caattcttat	aacaccggcg	240
agaccagggg	aggctcttct	gcaagtctat	gtagatctca	tctttgatat	tctc	294

<210> 1746
 <211> 316
 <212> DNA
 <213> Pinus radiata

<400> 1746						
aaccgcctct	tcttatacta	gtgcctttat	cggnnccatt	caaacttgct	cacggattcc	60
gacccttcgc	gctaaagctg	ctgcatttct	gtgtgtattg	aagatgggga	gatctccctg	120
ctgtgaaaaa	gctcatacaa	acaaaggggc	gtggaccaaa	gaagaggagc	atcgccctcat	180
cgccacatt	cgaactcacg	gcgaaggttg	ctggcgctcg	cttcccaagg	cgcgagggct	240
gatcgctgcg	gggaagagct	gcaggctccg	atggataaac	tacctgcgtc	ctgatctgaa	300
gcgtggaaac	ttctca					316

<210> 1747
 <211> 263
 <212> DNA
 <213> Pinus radiata

<400> 1747						
gtggctgttc	ccaggagagg	agagcctcag	ctgtctcgat	ctggcggttaa	ggggttacag	60

aagaagaatt	tccaagatgg	ttagatcttc	ttgctattca	aagcaaggct	ataggcggtg	120
gatttggacc	cctatggagg	atatgattct	ctctgaatac	attcgaattc	atggcagtg	180
tggatggaaa	aatatcgcta	aacgagcagg	tcttaaacga	tgtggaaaag	gttcgagatt	240
acgttggttg	aactatcttc	gcc				263

<210> 1748
 <211> 145
 <212> DNA
 <213> Pinus radiata

<400> 1748	
tccggtcgga	gaattgtggg tgggagcccc accggaggag tgaaggaaac tcaagagatg 60
tggactttt	gtgcagagca taacatcagt tgcattgattg aaaacattgc aatggattac 120
cgtgacaca	gcaatcgaaac gatta 145

<210> 1749
 <211> 206
 <212> DNA
 <213> Pinus radiata

<400> 1749	
ctgggttgaa	tcacatcgga gatggcattc gcaggaacac agcanaagtg caaggcatgc 60
gagaagacgg	tgtacgtggg ggatcagctc acagccgatg gtccagttct tcacaaggcc 120
tgcttccgct	gccatcattg caatggcacc ttaaagctca gcaactattc tctctttgaa 180
ggggtgctgt	actgcaaacc tcactt 206

<210> 1750
 <211> 263
 <212> DNA
 <213> Pinus radiata

<400> 1750	
gttaaatgtg	acccttccaa tgcgttttat gggtcagcct ctatgttaat ttgacacagt 60
gagctgaaat	attgcggctg gatgtgtaca ttacagacta tctcataaaa cggaaatcttc 120
ttgcatctgc	caagacattt atgacggagg caaaagtctc tccagaacca gtccgaattg 180
atgcacctgg	aggctttttg tttgaatggt ggtctgtgtt ttgggatatt ttcattctcac 240
ggacaaatga	gaagcactct gag 263

<210> 1751
 <211> 321
 <212> DNA
 <213> Pinus radiata

<400> 1751	
ccaatatggg	ggcagatagt atggttctctg ttacacactc tgaagtattt gagcattctt 60
ctacaaaaag	ttctattgat acagctgggt caatggatgt ggatgcagca tccaagtcca 120
atcacgttta	cagaactaca tctctcaacc actgtgtctc ttccctcccc atagatgttg 180
gaattgtacc	tgacagcaac attacatctg atatttcaac accttaccac gacccaagag 240
gagtatcgca	gattctctct cgggttggtc atctcgagg ccaaggtgag gtcatgggaa 300
gagaagcaag	agttctcaga t 321

<210> 1752
 <211> 316
 <212> DNA
 <213> Pinus radiata

<400> 1752	
cggcccggag	aattttgtct ctctgctaaa cgatggggaag agcgctcttg tgtgcccaag 60
gtgacagaag	caaggagacc tggaccaagg aagaggatga caggcttacc caatatattc 120
aggctcatgg	agaaggatgc tggcggtctc tccccaggc cgcaggtctg cttcgggtgtg 180
gaaaagtgtg	caggctgaga tggataaatt atcttcgccg tgatctgaaa cgaggagggtt 240

ttctgaaga tgaagacgat cttattctca aactgcacgc cctcctcgga aataagtgg	300
ctctgatagc gggctc	316

<210> 1753
 <211> 335
 <212> DNA
 <213> Pinus radiata

<400> 1753	
attgagtaaa acttcattca gttggattct catcgttttc atggcctaca acccgcaaac	60
atgccgcgcg cgccaccacg ccggacacga gccctgggctc agacaacgag tccggcgcg	120
gaggaggagg cgccggaggga gaaggcgagc cgaagaaaga tggcaatggc aactacatta	180
gagagcagga tcgctgtctc cccatagcga acgtggggcg gataatgaag cggcgctgc	240
ggggaatgcg aaaatctcca aagacgcgaa ggagacgggtg caggaatgtg tgcgcgaggt	300
catcagcttc attaccggcg aggcctctga caagt	335

<210> 1754
 <211> 349
 <212> DNA
 <213> Pinus radiata

<400> 1754	
cacacagaag cttgtccgat ggcgatcacg caggggaaat ggctacaggt gaatcagaag	60
gaaggggggc caaaagcgcg gagctcccat gcagttgcag tgggtgggaa aaaggcgtat	120
gtgttcgggtg gagaggtgga gccgcgcgtg ccagtgga caattgatga tatcttggat	180
ctggaggaca attcctggct cgtggcgagc gccaaaggag aggcaccgcc tcccagagtg	240
ggggcaccac tgggtcccat cggctctgtt atttatctct tcggtgggtg agaccagcat	300
cacaaggagc tcaaccattt ctattccttc gatacnaatt cctgccagt	349

<210> 1755
 <211> 289
 <212> DNA
 <213> Pinus radiata

<400> 1755	
tcttaatgcc ctaaaggagc ccagcaagaa gatcgacggc cgcgatgactg tcaagtcaagt	60
ggcctctgct ggttcacacg ctgccacgcc ggccggtgat gtatctgcc ggaaaaatcta	120
tgtcgggaaat gttcccatgg acatggcgcc agatcgccctg ctgagccctt tttctcagta	180
tggagagatc gaagaggggc cactagggtt tgataagcaa tcgggcangt caagggggtt	240
tgcgtttttt attttcaagt cangtgagc caactaagcg tgcgttggg	289

<210> 1756
 <211> 235
 <212> DNA
 <213> Pinus radiata

<400> 1756	
agagtatgat cctgttgcta aaatttcaat cttctctcgt ggacaagctg gaggtctgac	60
attctttgct cctagtgaag agagactgga atctgggctt taacagcaga gttaccttga	120
gaatcagatg gcagttgccc tcggtggaag ggtggcagaa gaagttattt ttgggaaaga	180
aatgtcacac acaggagcat cgaatgactt cccacaagta tctcgtgttg cccgg	235

<210> 1757
 <211> 457
 <212> DNA
 <213> Pinus radiata

<400> 1757	
gtaggatgga aggcacgggt aagagattca aagggaaggt ggcggtgggt accgcttcaa	60
cacagggcat aggattcgcc attgcacagc acctgggct cgaaggtgct tccgttgtcg	120
tcctctcacg caaaaagaac aatgtagagg aagcagtgga aaagatgaga gccaaaaggga	180

ttgatgttct	gggagtgccc	tgccatgttt	ccagtcgaga	acagaggagg	gatctcatcc	240
aaagactgt	agataaatat	ggtcacatag	acattctggt	ctcaaatgca	gctgctaatt	300
caactgtgaa	gcccatgttt	ttagttccag	agcctgtact	tgataaaatt	tgggagatta	360
atgtcaaggc	cactatttct	cttgtccagg	aagctgtctg	tcacttgtca	caagagtcatt	420
caattatcat	aatttcata	gttctgtctt	acagacc			457

<210> 1758

<211> 345

<212> DNA

<213> Pinus radiata

<400> 1758

catgtctttt	attcggggcaa	gcagacatgg	agtaagccta	tgggtgaaag	aaccccgccc	60
tctccaggag	acagccacac	ctgtaccact	gtgggaacaa	acttgtttgt	atttggtaggc	120
acagatggga	agaacctctc	acgggatttg	catatgctgt	acactactac	aaatacatgg	180
gtgcaacctc	acgttaagtgt	tgaaggacgg	gcagctcggt	agggggacag	tgtcgcactc	240
attgataacc	gtctttttat	atttggaggt	tgtggaaaag	ttaagatga	atctgaagag	300
atatattaca	acgaccttta	catactagac	acagttaact	taatt		345

<210> 1759

<211> 544

<212> DNA

<213> Pinus radiata

<400> 1759

gagcaaceca	cattgcattg	attgcactac	agtttcagcg	attttcaggt	catctcaggt	60
gtgcagctta	agcttattct	cttgaataata	tggctgagga	aggagagaag	gtcatggtta	120
acgtttatga	tctaaagccaa	ggacttgctc	gtcaactctc	aactactttt	cttggaaaag	180
ccattgaagg	aatttggcat	acgggtgtgg	tagttttatg	gaaggagat	tactttgggg	240
gtggtattca	acacagccct	acagggcaaa	ctccatatgg	aaaacggtag	aaagtgggtg	300
agttgggtgt	cactcacgtt	ccgatggaaa	tgtttgaaga	attcctggaa	aaaaaagcc	360
ctcgctatac	agcttaaaac	tatagtttgg	tgcaccataa	ctgtaacaac	ttcagcgatg	420
aggttgacac	gttttttggt	ggctgcaaca	tccagatttt	catccttagg	ctccccaaag	480
aagtgatgaa	cagcccaatg	ggccctttaa	taatgcccc	gataatgcag	tttgaagcta	540
ctct						544

<210> 1760

<211> 375

<212> DNA

<213> Pinus radiata

<400> 1760

cgatagccga	gagcacccct	atctctccca	ctctgttttc	tacatgcaac	aagctctggc	60
agcagcaatg	ggggcccgaga	ctatcatcgc	tgccctctatg	gcattctcct	taacattatc	120
aaatggccac	tatccgtttc	agtcgaggtt	caaggggtcc	gtggttcgaa	tcccgacag	180
ggcatttttc	ttcgcccgctg	cagcccgggc	gctgaccgtc	gtcgcanagg	ccaagaagc	240
cgttgccgtg	ctcaaaaggaa	attcacaggt	cgagggtgtt	gtcaatctct	cgcagggaag	300
caacgggtccc	acaacagtga	aggtccgttt	gacaggactg	actcctggga	agcatggctt	360
tcattcaaat	gagtt					375

<210> 1761

<211> 333

<212> DNA

<213> Pinus radiata

<400> 1761

tttataattt	tacaatccga	ggttgccagg	actttcagag	aggtcgatc	cgtggaaaag	60
actgagattg	acggatcgat	tgcaatggcg	tttgccggaag	agtattccga	tcgcgatgcc	120
gtatttcaaa	agctgaagtg	gaagtctgaa	aacaagattt	gttttgattg	caatgctaaa	180
agtcacaggt	ggggcgctcg	tgacatatgg	agtattcatt	tgtcttgatt	gttcacgaat	240
gcactggag	cttggtgttc	atgtcagttt	tggaggtcta	caaatctcga	ttatcgagcc	300

atggagcagt tgaattgat gagctttggt ggt

333

<210> 1762

<211> 331

<212> DNA

<213> Pinus radiata

<400> 1762

ctcgtgcccg	actataggcc	gcaccaccc	cagccgttcc	ttctttgctt	ctctctctct	60
tgtggggcat	gtgacctatg	gcctattcat	ttcttgcact	ggatctgaga	gcgaggggga	120
agttaacgag	agccctggct	ccaagaaatt	tgaaggcgcc	gcgmgcatat	gcgagagcag	180
ctctctcgcc	gtgtgatgaa	gmgccgagcc	aaactctggt	ctctctggcg	gggtctctga	240
tttcagctgc	gaatttacc	cagccgcct	gccggactcc	tctgtagcgc	ctagctccgc	300
tcactctgct	catctctcca	ctctgctctt	c			331

<210> 1763

<211> 568

<212> DNA

<213> Pinus radiata

<400> 1763

ccggccgccc	ctctccagct	gcctgatgga	acacagtgcc	gctacagcga	gttcttgaac	60
gccgtgaaga	agggtaaagt	ggagcgctgc	cgcttcagca	aggacggcag	ctacctccaa	120
ctgagcgccg	ctgatggggg	gcgtgccact	gtaacctctg	caaacgaccc	ggacctgggt	180
gacatctctg	cgatgaatgg	tgtggacata	tcggtttccg	agggggaggg	gagcaatggc	240
ctctccagcg	taactcggtaa	tcttttatct	ccaattttag	ctctcggggg	ttattctctc	300
ttattctggc	gggctcaggg	aggccctggg	ggtcccgagg	gtttggcgcg	ccctatggac	360
tcgggtcgct	ctaagtccaa	gttccaggag	gtgcgggaga	ctggagttac	atttgccgac	420
gtggcaggcg	ctgaccagcg	caagctggag	cttcaggagg	tggtggattt	cttgaataac	480
ctgataaagt	atactgcctt	tggtgccaa	atccccagg	gatgcttggt	ggtaggtccg	540
ccggggcagg	gcaagactct	actggccc				568

<210> 1764

<211> 351

<212> DNA

<213> Pinus radiata

<400> 1764

gagaagggaag	ctgctcttgc	tgccacacca	ccagaagatg	ataaacctac	aatatttgac	60
acaatactgc	agaaggagat	tcccagta	gtgggtttac	aggatgagaa	ggtaacttgc	120
ttcagggata	tgccacacca	agcacctact	acatcattat	catccccaaa	gtaaggggatg	180
gcttgactgg	ctatcttaag	gcagaagaga	ggcatgagga	tatttaggtc	acctgctata	240
cactgcaaaa	gttattgcaa	agcagggaag	ttatctgat	ggcttcagaa	ttgtcatata	300
cgatggtcct	actggatgcc	aatctgtgac	cattacata	ttcatctact	c	351

<210> 1765

<211> 462

<212> DNA

<213> Pinus radiata

<400> 1765

tgtaaatatta	ttcttttagg	gttacagaag	aagaaaatac	aagatgggca	gatctctctg	60
ctgctcaaaa	gaagggctca	accgtggggc	ctggaccaaa	agggaggata	tgattctctc	120
cgaataacatt	gaattctatg	gcgatggcgg	atggagaaat	atgccccaaa	gtaggggtct	180
taaacggtgt	ggaaagagct	gcgattacg	atggctgaac	tatcttcgcc	ccgacattaa	240
acgtggaaac	atttcctctg	atgaggagga	actcataatt	cgctccatc	gcctctctgg	300
caatcgatgg	tcgcttatag	caggaaagatt	accaggtcga	acagacaacg	aaatcaagaa	360
ctacttgaac	actcatatga	gcagaagct	gcttccattg	acgaatctt	aaccagagct	420
ttgctgtgcc	ccaaaagagag	gtcgcaatct	tcttctccct	gc		462

<210> 1766

<211> 532
 <212> DNA
 <213> *Pinus radiata*

<400> 1766
 gtaaaatga ccacggcggt gacttctgga acnccccgga gcgttcagga tggttgatga 60
 agcagggcga gtacatacaa acatggaggc gcagatgggt tgttctaaag cagggaaagc 120
 tcttctgggt caaaggaaat tacatcacaa gggattctaa tccccgtggt gtgttctcgg 180
 tgagcacctg cctgactgtc aaggagcgcg aagacgtcct caacaagcca ttcgccttcg 240
 agctctcgac gagcagagag accatgtact tcatcgaga cagcgataag gagaaggagg 300
 agtggatacaa ttccatcgcg cgtccatcg tacagcattc caggtcagtt acagacaagg 360
 agatcgntga ttatgatagc cagcgtgcgc ataatgaat acccaattcg aatcgatgg 420
 attcgcgtga aattggttgc aattagggtt tctaggggtt tctttgaat tttgtgatgg 480
 aacgcctcaa atcgggtgtc cattgcattt ctaggatgaa tcttaataaa tt 532

<210> 1767
 <211> 354
 <212> DNA
 <213> *Pinus radiata*

<400> 1767
 aacgcgctct tcttatacta gtgcctttat cggttccatt aaaacttget cagcgatttc 60
 gacccttcgg gctaaagctg ctgcatttct gtgtgtattg aagatgggga gatctccctg 120
 ctgtgaaaaa gctcatacaa acaaggggcg gtggaccaaa gaagaggacg atcgctcat 180
 cgccacatt cgaactcagc gcgaagggtt ctggcgctcg ctcccaagg ccgcaaggct 240
 gatgcgctgc ggggaagact gcaggctcgc atggataaac tacctgcgtc ctgatctgaa 300
 gcgtggaaac ttctcagaag aagaagacga actcgtcagt aaactccact tctc 354

<210> 1768
 <211> 430
 <212> DNA
 <213> *Pinus radiata*

<400> 1768
 cttcgacggc gcgatagcgg agagcacctt tatctctctc actctgtttc atacatgcaa 60
 caagctctgg cagcagcaat ggcgcccgag actatcatcg ctgcctctat ggcattctct 120
 ctacatttat caaatggcca ctatcggttt cagtcgcagt tcaaggggtc cgtggttcga 180
 atcccgaga gggcattttc ctccgcgctt gcagcccggg cgctgacctg cgtcgagag 240
 gccaaagaagg ccgttgcgct gctcaaaagg aattcacagg tcgaggggtg tgcagttctc 300
 tcgcaggaa acagcggttc cacacaagtg aaggtcgttt tgacaggact gactcctggg 360
 aagcatggct ttcatctaca tgagtttggg gacacaacca atggctgcat atcaacaggga 420
 gcacatttta 430

<210> 1769
 <211> 407
 <212> DNA
 <213> *Pinus radiata*

<400> 1769
 gaacgaacgg tgaagatata cagaggatct ctcaacggct tcatctccgt cgtcgtctct 60
 cctcccteca tctccagcgt ccgatctgat ctatcaaa gaagccctta aatcccteca 120
 gctttccaag cgcgggttct gttgctgat ccagggtccc tggctcatat gcggaaagctg 180
 gcagcccggg cagccaggaa agtctcgtt ccggggaaaca aagccccag tccagcgtgc 240
 gggagcaggga caggttctca cccatcgcca acattagcgg catcatgaag aaggcgtgc 300
 cggccaaagg caagatcgct aaagacgcca agggagacct gcaggagtgt gtctcggat 360
 ttatcagctt catcacgagc gaggccagtg acaaatgcca gcgagaa 407

<210> 1770
 <211> 347
 <212> DNA
 <213> *Pinus radiata*

<400> 1770
 cagactttttg ctccgaactg ttctgggtgaa acaaaatcca gtattgagct aggttttagaa 60
 tccgggtttgc tgggtcatctg ggagaggcga tccattcagc ttcgcaggcc cccgaagatg 120
 gcgttcgcgcg gcacaaacca gaagtgcagg gcatgtgaaa agacggtcta tttgggtgat 180
 caattgacag ctgataatct tgtttttcac aaatctctgt tccgctgccca tcaactgcaat 240
 ggaacttttaa agcttagcaa ctattcgtcg tttgagggag tttctatattg caaacctcat 300
 tttgaccagc tgtttaagag aacaggaagt ttggataaaa gttttga 347

<210> 1771
 <211> 469
 <212> DNA
 <213> Pinus radiata

<400> 1771
 cgatagccga gagacacctt atctctctcca ctctgtttta tacatgcaac aagctctggc 60
 agcagcaatt gcggcccccga ctatcatctgc tgcctctatg gcatctctctc taacattatc 120
 aaatggccac tatccgtttc agtccgagtt caaggggtcc gtggttcgaa tcccgcaaaag 180
 ggcatttttc ttcgcccctg cagcccggggc gctgaccgtc gtccgagagg ccaagaaggc 240
 cgttcgcgtg ctcaaggaa attcacaggt cgagggtgtt gtcaatctct cgcagggaaga 300
 caacgggtccc acaacagtga aggtccgttt gacaggagct actcctggga agcatgggct 360
 tcattctacat gaggtttggt acacaaccaa tggctgcac tcaacaggag cacattttaa 420
 tccaaaaaaa ttgacacatg gtgctcctga ggatgatgta cgccatgcg 469

<210> 1772
 <211> 461
 <212> DNA
 <213> Pinus radiata

<400> 1772
 tcttaacctt tctctgagcc accgagaatt tctctctccg aatacccaact tctcagagat 60
 tcttctctgc aactctgttt tcttcagcga gatttgtcag tgaatttgtga ggagtattga 120
 gtcttatcat gcggatccag tgcgatccct gcgagcaggc aactgcttca gtgatattgt 180
 gtgcagacga ggctgtctctg tgcagggaat gtgatataaa agtccacaag gccaaacaagc 240
 ttggcagcaa acacaagaga ttatctctcc tcgaaacttc tcgaaagctc tctcgtctgc 300
 acatttgccc ggataggccc gccatcggtt tctgtctcga agatcggtct atgctgtgcc 360
 aagactcga tgagtcctgt cattctctgcg acacattagc agcaaacac caaagggttc 420
 tggccactct cactagggta ggtctcaatg cctgtctac a 461

<210> 1773
 <211> 332
 <212> DNA
 <213> Pinus radiata

<400> 1773
 gacaatatgg ctgcatggct cactggaata aacactcttc gcatccagcc cttcaaaact 60
 ccgcctcttg gccccatga tgcgaagggt gcgatgaagg ctgtgggtat ctbtggcagt 120
 gcagctccact atttagggac attacgggtg gcggacttta ttgtaaaaga gccaatgggtg 180
 attggtcatg agtctgtctg aataattgag gaggttggca gtgaagtga acatctgggt 240
 cctggtagcc gcgtagcttt ggagcctgga atatcgtgtt ggcgttgtga ccaattgtaag 300
 cgaggctcct acaatttggt tcccgagatg aa 332

<210> 1774
 <211> 322
 <212> DNA
 <213> Pinus radiata

<400> 1774
 ctctctgtgca gcgtacgcct tcgcctttgc gatttcgagc eccattggaa ttgccattgg 60
 aatacttatt gacgccacta cagagggccg agtggcagac tggattttatg caatctcaat 120
 ggggttttgc tgcgggtctt tcgtttatgt tgccatcaac catctctctga tgaaggagatt 180

aatacagaac	cctctgaaag	gtgtgattcg	ctttgacaaa	ccctttttaca	aataatttggc	240
tgtactcaact	ggagctggac	tgattgcagt	ggtaatgatt	tgggacacct	agtggtaagt	300
aattggggaca	cttcttagct	gc				322

<210> 1775
 <211> 428
 <212> DNA
 <213> Pinus radiata

<400> 1775						
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cgaagccngt	ttccaaanatt	ggatnngggag	aaactcatga	agatggctgg	tcgagtcctgc	120
actggcgga	aggggtacaat	gcgaaggaaa	aagaagacaa	ttcataagac	tgccacggca	180
gatgacaaga	gacttcaaa	taccttgaaa	agaataggcg	tgaataacat	ccttgcatt	240
gaagaagtca	atatttttaa	ggatgacct	gttattcatt	ttgctaacc	aaaggtccag	300
gcttctattg	ctgccaacac	atgggtgggt	agtgggtcat	cgcaaacaaa	aaaacttcaa	360
gatcttttcc	ctgggtatcat	caatcagctt	ggaccagaga	gttttgccaa	tctgaggaag	420
attgcaga						428

<210> 1776
 <211> 512
 <212> DNA
 <213> Pinus radiata

<400> 1776						
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ccttaccagt	tggggctctc	ttttgcggtt	tctacacata	gccgctgcga	ttctggggag	120
tttctttggc	ttgatatttt	gggttaaaat	tctgggtatt	gtggtttgct	cacactaatt	180
atcctgtcat	ggatcatcaa	cagcagcagt	ggatgatgca	gcacaaact	caaccaagct	240
atcagcagcc	cgagtattcg	aatgacgaaa	tccggacact	ttggatcggg	gatttgcagt	300
attgggtcga	tgaaaattat	ctccatactt	gcttttgcga	aaccggagag	gttgtgtcta	360
taaaagtgat	tccgaacaag	gctacaggt	atccggaag	ttatggtttt	gtggagtta	420
tttcccatgc	agcagctgag	aggattcttc	aaacatacaa	tggtacacag	atgcctggca	480
cagagcaact	ttatagatta	aattgggctt	cc			512

<210> 1777
 <211> 498
 <212> DNA
 <213> Pinus radiata

<400> 1777						
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gggcatagg	ttcgccattg	cagagccct	tggcctcgaa	ggcgcttccg	tcgctgtctc	120
atcacgaaaa	cagaaaaattg	taggggaagc	agtggaaaag	ctgagagcca	aagggattga	180
tggtctggga	gtggcttgcc	atgtttccag	tcgagaccag	aggagagatc	tcattccaaa	240
gactgtagat	aaatatggct	gcataagacat	tctgggtctca	aatgcagctg	ctaattccaac	300
tggtggacc	attgtttcgg	ttccagagcc	tgactttgat	aaacttggg	agatttaacgt	360
caaggccact	attcttcttg	tccaggtatc	ttctgtctac	ttgtcacaag	agtcattcaat	420
tatcataatt	tcgtcaatta	ctgcttacag	gccagaggca	atgatggcca	tgtatgggg	480
taccaagact	gctctttt					498

<210> 1778
 <211> 435
 <212> DNA
 <213> Pinus radiata

<400> 1778						
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gcgagtgctg	cagaattttt	atgcagtgga	tcggcggtata	atactattag	aatgtggaaa	120
aggggagaag	gaacacggca	ttaactgtttg	cggtgtttag	aaggtcacag	aggactgtgt	180
aagtccatcg	cagtgtcttt	agacactgtg	aggggatgcc	acgtctcacg	cggaagcctg	240

gatcatgaca	taaaggtttg	gcgggttagt	tcaataaaaa	gcagttccga	cgatcatgcc	300
gaggggtgcc	accataacaa	tcgcttgaaa	accatacact	ccctcgagga	aagcgttttt	360
catccaaggc	aaatttttgg	tatttcatga	aactgatgta	gccatctacg	tgtaacataa	420
ctacaatatg	cctgt					435

<210> 1779

<211> 470

<212> DNA

<213> Pinus radiata

<400> 1779

gccatggctg	catttcgcag	ggtttctgtt	ctgtatccca	ggcccttggt	catatggcgg	60
aagctggcag	cccgggcagc	caggaaaagt	ctcgtttccg	ggaacaaaag	cccagttcca	120
gcgtgcggga	gcaggacagg	ttcctaccga	tcgcccaact	tagccgcctc	atgaagaagg	180
cgctgcgggc	caacggcaag	atcgctaaag	acgccaaagg	gacgtgtcag	gagtggtgct	240
cggaaatttat	cagcttcctc	accagcgagg	ccagtgacaa	atgccagcga	gaaaagagga	300
agacaatcaa	cggcgatgac	ttgctctggg	ccatgagcac	gctaggggtt	gaagattata	360
tcgagccctt	gaagggttac	ttgctctatg	acagagaggc	ggaggggtgac	aataagggat	420
cttcaaaatc	tggagttagc	caatatggaa	agaaagagtc	aaatgtacat		470

<210> 1780

<211> 359

<212> DNA

<213> Pinus radiata

<400> 1780

attcgcttct	tccaacaaca	gcgaagccga	tttccaaga	tgatagggga	gaaactcatg	60
aagatggctg	gtgcagtcgc	cactggcgga	aagggtacaa	tgcaaggaaa	aaagaagaca	120
attcataaga	ctgccacagc	agatgacaag	agacttcaaa	gtaccttgaa	agaataaggc	180
gtgaataaca	tcctctgctat	tgaagaagtc	aatattttta	aggatgacca	tggtattcat	240
tttgctaac	caaaagttca	ggctttctat	gctgccaaaca	catgggtggt	tagtggtgca	300
tcgcaaacaa	aaaaacttca	agatcttttc	cctgggtatca	tcaatcagct	tggaccaga	359

<210> 1781

<211> 360

<212> DNA

<213> Pinus radiata

<400> 1781

cgcccgagc	aatttttctt	ctctgctaaa	cgatgggaag	agcgctctgc	tgtgccaaag	60
gtgacagaag	caaggagacc	tggaccaagg	aagaggatga	caggcttacc	caatatattc	120
aggctcatgg	agaaggatgc	tggcgtttct	tcaccaaggc	cgcaggctct	cttcggtgtg	180
gaaaaagtgt	caggctgaga	tggataaatt	atcttcgccc	tgatctgaaa	cgaggagggt	240
tttctgaaga	tgaagacgat	cttattctca	aactgcacgc	cctcctcgga	aataagtgtg	300
ctctgatagc	gggtcggttg	cctggctcga	ctgacaacga	gatcaaaaac	tactgggaact	360

<210> 1782

<211> 141

<212> DNA

<213> Pinus radiata

<400> 1782

cttctgtgga	ttttatcaag	aactctttta	ctagtgttga	tgatgataaa	ggttcttttg	60
caccaacaaa	tttcatgtag	caggctgatg	aattgatccg	aaaagagctg	gtgtcattac	120
tagagcacga	caatgcaaaa	t				141

<210> 1783

<211> 370

<212> DNA

<213> Pinus radiata

<400> 1783
 atttgagtggt ggtgttttca ctgacagaag cagcaaggct agttttccac tacagtactg 60
 caacttcctc ctattttccca cctcctcaag ctaccctcct tgactttcagt tcccatcctg 120
 tgaatccacc atccaaacag ctcaatgaca caaccagatt agcccaagca ttgtttctgat 180
 aattataatc ctgacaggtta tattttttct ctctgcagtg ctccacgttt taatcagata 240
 ctgggcaaga tctcccaata gagactccaa cagctcaggg gccatagggt caatcgaaag 300
 gcaactgcag cagctgtttc atctccatga cgcaagggtt gagcaggcct tcatgtatgc 360
 attaccagtc 370

<210> 1784
 <211> 381
 <212> DNA
 <213> Pinus radiata

<400> 1784
 tggttttgat ttgagtagcg ggtttataag tccgggattt ggtggttttt aaatggggct 60
 aagctattct taatttttgt ctgttggtga cagcagagat ttgaagggtt tttgaatttg 120
 aatcatggaa gttgagtgct gcagccctcg gtcttccgct caggggtgtg aggttgacat 180
 gaagccaacg atgggtgttg aagatacgtc taatcaagga cgcagcaaat atggatgttc 240
 acactaccgc cggagatgcc aaataagggc tccgtgttgt aatgaagtct ttgactgtag 300
 gcattgtcat aatgaggcca aaaattcaat ggatgtccat ccacttgaca gacatgatgt 360
 accgcgcat gaagtccga a 381

<210> 1785
 <211> 441
 <212> DNA
 <213> Pinus radiata

<400> 1785
 cacaggcagc agataaatatg aggcacaaga attcgtgcca attcgtttc tttgcttact 60
 atttcttctc tcttctttaa caaatggata tattctaate agtgcgctgg taatttgacg 120
 gtggcaggga agggntgctg tgatcacagg aggtgccagt ggaatcggag aggcatacggc 180
 caagtgtgtc gtggagaagt gagcgaagt agngatttga gacctcagg acgacatagg 240
 aaacgcgtct getcaatccc tgcctcccaa cgcctgcttt ttccactgag atgtctccaa 300
 agaggcggac gttttccgcc tgctagactt ggcgctggag aagcacggac gtctcgacat 360
 agtgttcagc aatgcgggaa tccacggcgg gttattctcg tccatggcag acgtcactgt 420
 cgaggatttg gaaaggggtca t 441

<210> 1786
 <211> 435
 <212> DNA
 <213> Pinus radiata

<400> 1786
 caataatgca ggagtccttc aattagtgtc caacctgtgt tttgtcttgg aattgagcag 60
 gcttctggcc aactggcttc tgtccctctt ctggatatca gacctcaat atggcgcttc 120
 tctggatcag cccctgcgca attggcccat cactccttta actaatcctg ctagtctctg 180
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 tgcatacctg gaccagcaga ggttctgtga gaatttgccc gcgctcttcg actatgggag 300
 tctcagtgct gatcgccagg aggtggttgt ctgtattgtt tgtttcaatg agttcgtgtc 360
 gcggttcgga gtgcgcgcgc tagctaaatg tggccatgtt ttccatatgg agtgttttga 420
 taagtggatc gacta 435

<210> 1787
 <211> 323
 <212> DNA
 <213> Pinus radiata

<400> 1787
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 aagctgtgag gaatcacttt ctcccctgtt ggcaacttac gtgcactcgc atgtgagcaa 120

agaaaaagat	gtgagcgcg	cggtggatgt	ggccatggat	aagtatggcc	aactggacat	180
tatgtataac	aacgctggaa	ctaatagacag	ctttttggtg	aagagcgtgg	tagagatatga	240
tatggagcaa	tgcgatcgaa	tgatgaatgt	aaacgtgaaa	ggagtgatgc	acggcatata	300
gcacgcgcgc	cgctgatgat	tcc				323

<210> 1788

<211> 359

<212> DNA

<213> Pinus radiata

<400> 1788

cccttatctc	ctccactctg	tttcatacat	gcaacaagct	ctggcagcag	caatggcgccg	60
ccagactatc	atcgctgctc	ctatggcctc	tcctctaaca	ttatcaaatc	gccactatcc	120
gtttcagtc	gagttcaagg	gggtccgtgt	tcgaatcccg	cagagggcat	tttccctcgc	180
gcctgcagcc	cggtgcgtga	cagtcgtcgc	agagggccaag	aagggcgttg	ccgtgtctcaa	240
aggaaattca	caggtcgagg	gtgtgttcaa	tctctcgcag	gaagacaacg	gtcccccaac	300
agtgaagctc	cggttgacag	gactgacttc	tgggaagcat	ggctttctac	tacatgagt	359

<210> 1789

<211> 350

<212> DNA

<213> Pinus radiata

<400> 1789

ggatagttgt	gctccgagga	aagcattgaa	ttggggataa	tggcggaaac	tgtcacatat	60
tcattggcgg	tgggtttcgt	ctgtttcgtt	ctgacgatgt	tactacttca	actctacaga	120
atagtgtgga	gggagggacag	tcgaggtcac	aatttgcttc	ccggttccag	tgggtggcca	180
ttgatggag	agaccttgag	cttcatcgga	gggatttaatt	ccatttctaa	accacgcca	240
ttcatccaag	atcgagagca	aaggtatggg	aagatatcca	gaacaaattt	gtttggaaga	300
tctcgaatga	ttgtgtctgt	ggacccagaa	ttcaacaagt	atattctgca		350

<210> 1790

<211> 337

<212> DNA

<213> Pinus radiata

<400> 1790

gatttaggta	gggttttaag	gaagaaagac	gatccaagca	tgggggtttt	atcgagctcc	60
caacgcagtt	gaaggggtgc	gcagcagaag	aagatcggtt	tcgttcctcc	tcactacaaa	120
agatggatcg	ggataagctt	atgaagatgg	ctggtgcagt	tcgtactggt	ggaaagggtta	180
cagtcgcgag	aaagaagaaa	gcagtttcaca	gagccacaac	aacagatgac	aaaaggctcc	240
aaagactcct	gaagagggtta	ggagtgaata	ctatttctgc	tattgaagaa	gtaaatattt	300
tcaangatga	gatgtgctatt	cattttataa	accctaaa			337

<210> 1791

<211> 315

<212> DNA

<213> Pinus radiata

<400> 1791

gtttggcatt	gaagaccaat	aaataattat	tgtgaagcag	cagcgtttta	atcagagatc	60
cagcaagaag	aggaccagga	aaaatcattt	gcagaacaag	aagataatcc	aagatgtcaa	120
gcacacgcag	ccctcagttg	gggtgcggag	aaacttgcgc	ttgcgccgat	tgcaggtgtg	180
gagttgtgag	tattgcgcct	ccatccgacc	aaacaagtgg	gggacatgca	tattgcaagt	240
gtggagaaca	ctgcagctgc	aatccatgta	actgttcaaa	gatgacgcag	actgttagtg	300
ggaaatccct	ctgta					315

<210> 1792

<211> 376

<212> DNA

<213> Pinus radiata

<400> 1792
 gttttatcat gcgatccagc tgcgatgcct gcgagcagc agctgcttca gtgatatgtt 60
 gtgcagacga ggctgctttg tgcagggagc gtgatataaa agtccacaag gccacaacagc 120
 ttgccagcaa acacaagaga ttgcctcttg tgcgaacttc cccaagctc tctcgctgcg 180
 acatttgcca ggaataggga gccatcgctt tctgtctcga agatcgctgt atgctgtgcc 240
 aagaatgcga tgagtcggtt cattctcgcg acacattagc agcaaaacac caaagggtcc 300
 tggccactgg cattagggtta ggtctcaatg cctctgcatc agaactctcc ggctcaagcg 360
 aattgacaa acagcc 376

<210> 1793
 <211> 407
 <212> DNA
 <213> Pinus radiata

<400> 1793
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 ggggtatggg caatggcagc gtggtatctt ttggtacagc accaacagcc taagcagagc 120
 cacaattgtc cttgggagca tcttccaccg ggggctgtgg gatggccctt tctcgagagc 180
 atcatctctt tctatttcgc aacaccggat ttgtggaagc agcgccgggg aaggtatggg 240
 aatttgttta gaacgttctc gataggatat ccaatggtta tctcaacaga tctcgaggtt 300
 aacaagttaa ttctgaataa tgatggcgcg ctgttcgttc ctgcataacc gtgcatttgg 360
 tcacagataa tcggagagtg caatatcttt gctgctcggt gagactt 407

<210> 1794
 <211> 532
 <212> DNA
 <213> Pinus radiata

<400> 1794
 cctgggtgcc ttcgtcgctc acttcacaa caagttgaaa gtgaaatcaa tgcgatctgaa 60
 ggtgaagggt aaggtgaagc gtattctcat tgcctcaca ccgccatgga cattacagca 120
 cggcagatgt tgcagttgat tgcaccacat ttgctggaag aggaagacga aatggatgtt 180
 cttgaggtag ggggaaatta tccattctcc tcatcatcat ctctattatc ettcctctccc 240
 acagtgcgct ccgatttttc ccagccact gccagtgccc catgccaacac cagcgacagc 300
 acatcattat cagaagagaa tgagagtgc caaccctctt ctgctctctt tctctgtgta 360
 tccactgttt tacgaagcgc agagggcgta aatgtaaaag taatgccaca gccacagcca 420
 caggagggag acagtcgaga gaccatcaaa gacaggcact acagaggagt gaggaagcgg 480
 ccatggggta aattcgagc tgaatcagc gaccccgcca cgaagggggc ca 532

<210> 1795
 <211> 502
 <212> DNA
 <213> Pinus radiata

<400> 1795
 tgcataccat cattgtaatg gaggtgaaag gaataggagt gggattctta ttaagcaatg 60
 gaagggtacg ctgcgaataa cgatgcagaa ctttgagcaa aacccttcaa gtggaacaga 120
 agttgtctta tttcgatctc aaggaaaacc ccgaggtca ataccttaaa atctctgaga 180
 agacctccgg ctacaggtctc acaataattg tgccatttgg tggagttgca tggttctctg 240
 atctctttta ttattatgtc gacggagatg acgaggaagt tttagcaag gaattgcagc 300
 tggatgccaa ggtattttat ttcgatgttg ggtgtaataa aaggggtcgg tctctgaaga 360
 tttctgaagc atctacatcc tacagtcgca gcacaatcat tgtacctgta ggaaacacaa 420
 gaaaagatgg ttgggcagca tttagaaata ttttaggaga gataaatgaa gcttccaaca 480
 agcttctggc ccatccgaac at 502

<210> 1796
 <211> 476
 <212> DNA
 <213> Pinus radiata

<400> 1796
 cgaaactcga atcgatatgc ttgtgtgccc gttaaataat ttgagcnggc ttgactttctc 60
 tggttcagaa atggcgagct aaagtaatag ttgtccccga ggctctgggt tcgaatctcg 120
 ttggcgtgaa aggtcaaat ttctctcga gtttcattga ttctgaaaaa ctggcatagc 180
 tatggcgatg agcaatggga gattgtgtga agatttggat aggattaaag ggcctggag 240
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 cctgataagt aaaggaatcc cggggcgatc cgggaaatcg tcgaggctac ggtggtgcaa 360
 tcagctgagc cctcaggtgg agcacagacc ttttaccctg tccgaggatg ctgctattct 420
 gcaggccac gcgcagcac gcaacaaatg ggcaacaatt gcccgagccc tccccg 476

<210> 1797

<211> 509

<212> DNA

<213> Pinus radiata

<400> 1797
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 gctgtgagaa ggctcatact aacaaaaggg cctggactaa caagaagat gaccgcctta 120
 tcgctccatc tcgagccccc ggcaagaggg gctggcgctt tcttcccagg ccgcaggggc 180
 tgctgagatg cggcaagagc tcgagactgc gatggataaa ctacctgcgt cccgatctga 240
 agcgtggagc cttcacggaa gaagaagacg agctcatcat caaactccac tctctcgttg 300
 gcaacaagtg gttcttaatt gcaggagatg tgcccggagc gacggacaac gagataaaga 360
 actactggaa cacacacatc aaaagaaaat tgctgagcaa gggactcgac ccccaaaccc 420
 atcgtccact aggcagcca aacaatcccc ccgtcactcg gctgttccc gagcacgaaa 480
 ttccgacatt ccagaacct gcaacgccc 509

<210> 1798

<211> 247

<212> DNA

<213> Pinus radiata

<400> 1798
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 gtttcagtcg gagttcaagg ggtccgtggg tcgaatcccc cagaggccat tttctctcgc 120
 gctgtcaagc ccggcgctgc accgtcgtcg cagaggccaa gaaggccgtt gccgtgctca 180
 aagggaattc acaggtcgag ggtgtgtgca gttctctgca ggaagacagc ggtccacaaa 240
 cagtga 247

<210> 1799

<211> 147

<212> DNA

<213> Pinus radiata

<400> 1799
 tcattattct tccgctgtgt aaaagatggg agatctccgt gctgtgagaa ggctcatact 60
 aacaaaaggg cctggactaa caagaagat gaccgcctta tcgctccatc tcgagccccc 120
 gggaaggggg ctggcggtct ctccca 147

<210> 1800

<211> 361

<212> DNA

<213> Pinus radiata

<400> 1800
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 gatccagcaa gaagaggacc aggaataatc atttgcagaa caagaagata atccaagatg 120
 tcaagcacac gcagccctca gtgtgggtgc ggagaaactc gcgcttgcgc cgattgcaag 180
 agtggagtgt tgagtattgc gctccatccc gaccaacaaa gtgggggaca tgcattattgc 240
 aagtgtggag aacactgcaa ctgcaatcca tgtaactgtt caaagattga cgagaactgtt 300
 agtgggaaat cttctgttaa atgtggagag aattgcgcct gtgaacatg cactgcagc 360
 a 361

<210> 1801
 <211> 359
 <212> DNA
 <213> Pinus radiata

<400> 1801
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 aagaagaatt tcgaagatgg ttagatcttc ttgctattca aagcaaggtc ataggcggtg 120
 gatttggacc cctatggagg atatgattct ctctgaatac attcgaaatc atggcagatga 180
 tggatggaaa aatatcgcta aacgagcagg tcttaaacga tgtggaaaaga gttgcagatt 240
 acgttgggtg aactatcttc gccccgacat taaacgtggt aacattttct ctgatgagga 300
 ggacctcatt attaggttgc atggccttct tggcaatcga tggctcttga tagcaggag 359

<210> 1802
 <211> 475
 <212> DNA
 <213> Pinus radiata

<400> 1802
 agcgtctata gaagagcagg gactaattcc atctttctcc atttctatctt ctcttcccaa 60
 tcaaaaccat ggcgtctaac ggacagctta atgcaggcac tggctgtggt ggtgatctga 120
 ccaatgttgg agatcgacga ttggaggagg aggttgcaat agtaacgggc ggggcagcgg 180
 gcataggaga agccattgtt cagttgttca ttaagcatgg agccaaagtc ataactcgccg 240
 acgttgcgga gaaagctggc agaaagcttg agcaatccct ttcaaccgct ttggcaactt 300
 acgtgcactg cgatgtgagc aaagaagagg atgtaaacgc agcagtggtg gttggccatcg 360
 acaagtatgg tcaactggac attatgtata acaacgctgg aactaacgac agcgttttgg 420
 tgaagagcgt aacagagtat gatatggagc aattcgatcg agtgataaat gtaaa 475

<210> 1803
 <211> 382
 <212> DNA
 <213> Pinus radiata

<400> 1803
 attactttca gttttgcaag ctggagatga ctttgactgt ccagtatggt tatcaccacc 60
 attcagaggct atcataacca tctgttccca tgtgttctgt aagaagtgca ttgagaagac 120
 attgaaaacat cttaaagccac agtgtccatt gtgccgtaag cagcttacag catctgatct 180
 ttttagttca ccaaagggtg ctgacgagaa tgaagttaac tcagaaaaag tagccaaaac 240
 tggttcaaaa attaatgctt taatagctct attgaaagag tccagggatc atgatccaac 300
 tacaaaatct gttgtattct cacaatttgc aaaaatgctg gatctcttgc atgaaccttt 360
 gaaaagtcag gcttctagtt tg 382

<210> 1804
 <211> 533
 <212> DNA
 <213> Pinus radiata

<400> 1804
 atcgctcgga atttgtcttc tgcaagataa tattcaatta atctattgtc gaaggaaatt 60
 tgagccgtat aagaggataa tcaaaagaag cgggttgatt tctccgggat taaaggatgg 120
 atcaagaaaa ctggaacatc ggagctgatg gcaactggctg ccaagctcca gaagggcaca 180
 ctctttgcgc caataactgc ggtctttttg gcagttcgcg aacgagaaac ctgtgtctga 240
 aatgtacag ggaatcgtatt atgaaggagg cccaagcttc atctgcaatg gccgcggttg 300
 agaagtcatt tgcgcggggg tctccgatgg aggagggagc cctcttttcc aagccagatg 360
 ttttcgtcga acaaaagcgt gcaccgatct cccaagcgt agtccaagcc tgcctcagttc 420
 acttgctgta tataggttca tcttctcttc cacaacctcc tgccgaaact cctaaccggt 480
 gcttctctcg caggaaaaca gtcgggtctga ccggttcaa atgtcgtgtgc gga 533

<210> 1805
 <211> 549

<212> DNA

<213> *Pinus radiata*

<400> 1805

gagtggaggaa	gctgtagatg	aaaagcgtgt	aaatctgcag	caagcagaag	gtccggaggga	60
gcccgagggtt	gtaactgcga	gcacattaga	atccccaaaa	agtacagaac	aggagaatag	120
tcttgagggtt	gaggaagctg	gtgacaaaaa	gctccaggca	catgtgaatg	aaacgtcttt	180
gaatgcagat	caagaaaatt	ccatcaagga	gcttcacaac	aagtatcctc	gttactcggga	240
agaaatttttg	acgaattatg	tggtctgatca	ggatggcgat	ttgaaaagagc	tagaagcact	300
cttaaaaaaca	ttacaacgcc	aagagattag	agctgctaat	cgaaaaatgt	cagggtccatc	360
atcttcaaaag	gcaacagata	acacagatgt	ttccacggaa	tcaccaccct	caaagctaca	420
gaatgcctct	aagggcaaaa	ccagaggaaa	gagcgccaag	aagagagaaa	gggatacaac	480
tttatccgta	ggtagagttc	acaaaaacgcg	tcgaaaaact	gcttccgacg	atgtgaaggc	540
cgcttctaa						549

<210> 1806

<211> 397

<212> DNA

<213> *Pinus radiata*

<400> 1806

gttttgggct	ctcatttggg	agttacattc	aaccaagctc	atcacatggc	gtcccgagaag	60
gaagctgctc	ttgctgccac	accaccagaa	gatgataaac	ctacaatatt	tgacaaaata	120
ctgcagaagg	agattcccag	tacagtgggt	tacgaggatg	agaaaggta	tgcatctagg	180
gatctcgac	cccaagcacc	tactcacatc	attatcatcc	ccaaagtaag	ggatggcctg	240
actggcctat	ctaaggcaga	agagaggcat	gaggatatct	taggtcacct	gctatacatc	300
gcaaaagtta	ttgcaaagca	ggaagggtta	tctgatggct	tcgaaattgt	cattaacgat	360
ggctctactg	gatgccaatc	tgtgtaccat	ttacata			397

<210> 1807

<211> 242

<212> DNA

<213> *Pinus radiata*

<400> 1807

caagatgggc	agatcttctt	gctgctcaaa	agaagggttc	aaccgtgggg	cctggacca	60
aaggagggat	atgattctct	ccgaatacat	tcgaattcat	ggcgatggcg	gatggagaaa	120
tatgcccaca	agagcaggct	ttaaacgggt	tggaagagc	tgacagattac	gatggctgaa	180
ctatcttcgc	ccgcacatta	aacgtggaaa	catttcccct	gatgaggagg	aactcataat	240
tc						242

<210> 1808

<211> 364

<212> DNA

<213> *Pinus radiata*

<400> 1808

caagagtaaa	ccgaaggaa	tagaaggga	aggaggcatc	ggcagcggtt	ttcctcctcc	60
tctcctctcc	tgcatcttcc	aaactcaaat	acctctcctc	tcacaatcat	ggaaggcgga	120
gtcgtctttg	aatctgtgca	aaacccaactg	gatcgctgga	acactggaaa	tatggaccat	180
gggtgtgccc	attacaggag	acgatgtcgg	attcgggccc	cttgttgcaa	tgagatctat	240
gactntaggg	ctctgcacaa	tgaagccatg	agccatctaa	aggacccctt	gctgcgcoat	300
gagctcccaa	gatacaaa	ggaacgggtt	atttgtcttc	tctgtgacac	tgagcaaaat	360
gtca						364

<210> 1809

<211> 265

<212> DNA

<213> *Pinus radiata*

<400> 1809

cttaagtcttc	agatgcctgg	taattctctt	tttccaactg	gaaacgctgc	cccatcaact	60
aaaaatcttt	actatctcatt	tgactctggga	gttgtagcat	tcttgatcat	gtccactgaa	120
actaatcttt	tagatggaag	tgatcaaat	gctttcatag	agcaagattt	gaaaaaggtt	180
gatagaacaa	agactccatt	tgtagtattt	caaggctacc	gtcccatgta	tacgactaac	240
tatgaactaa	aagatgcgcc	tctaa				265

<210> 1810

<211> 346

<212> DNA

<213> Pinus radiata

<400> 1810

cttgaatcga	tcttgccctgc	ttgtgccgga	gcgcgcacag	tggtgtggtt	gttctcggtt	60
ttcatcttaa	agcggcggtt	gcaggaattg	attgtgtgag	gggacgagat	gtgtgcagag	120
gtaagtccaga	gtgccatggc	cgtgcacact	atgcagatgg	cgagaatgga	aatgaagcgt	180
gaaataggag	tctgtgagca	ggaagcttcg	tcggccgtga	aggaaacgca	tttcagaggc	240
gtgagggaaa	ggccgtgggg	gagattcgca	gcggaaatta	gagatccctt	gaagaaaaac	300
agagtctggc	taggcacttt	tgacactgcc	gaagaagctg	ccgagc		346

<210> 1811

<211> 353

<212> DNA

<213> Pinus radiata

<400> 1811

cgaaactcga	atcgatatgc	tttgtggcgg	gttcaaatat	ttgagctggc	ttagcttctc	60
tggttcagaa	atggcggaact	aaagttaatg	tggtccccga	ggctctggtg	tcgaaatctcg	120
ttggcgtaga	aggtcaaat	tttctctcga	gtttcattga	tcttgaaaaa	ctggcatagc	180
tatggcgatg	agcaatggga	gatttgtgtg	agattttggat	aggattaaagg	ggccgtggag	240
ccccgaggag	gacgcgtcgc	tgacagagct	tggtcagaaa	tacgggcccga	ggaactggac	300
cctgataaagt	aaaggaatcc	cggggcgatc	cgggaaatcg	tcgnagcttc	ggg	353

<210> 1812

<211> 185

<212> DNA

<213> Pinus radiata

<400> 1812

tcttgctgccc	acaccaccag	aagatgataa	acctacaata	tttgacaaaa	tactgcagaa	60
ggagattccc	agtacagtgg	tttacgagga	tgagaaggta	cttgcatcca	gggatatcgc	120
accccaacac	ctactcacat	cattatcatc	cccaaagtaa	gggatggctt	gactggccta	180
tctaa						185

<210> 1813

<211> 337

<212> DNA

<213> Pinus radiata

<400> 1813

caataaatgg	ccgaatgaat	taatcaacga	tgaaatgaat	taatgaataa	gctattggat	60
ctaggaaggg	ttttggcgga	gaaagtgttg	ggctctcatt	tgaggattac	attcaaccaa	120
gctcatcata	tgccgtccga	gaaggaagct	gctcttgctg	ccacaccacc	agaagatgat	180
aaacctacaa	tatttgacaa	aatactcgag	aaggagatcc	ccagatagct	ggtttacgag	240
gatgagaagg	tacttgcat	caggatatac	gcaccccaac	acctactcac	atcattatca	300
cccccaaggt	aaggatggc	ttgactggcc	tatctaa			337

<210> 1814

<211> 340

<212> DNA

<213> Pinus radiata

<400> 1814
 gtccaaggga gaocggatgat tcagagtcog atcgcccgcca tggccgtaga caccatacag 60
 atggcgagag tgggtgtaaa aatgaagatc ggaggaggcg gctgcgagga agaggcgctcc 120
 tcggctgtga aggaagacga ttccagagga gtgaggaaaaa ggccgtgggg gagattcgct 180
 gccgagatca gagatccctt gaagaaaaacc agagtctggc tggggcacttt tgacactgca 240
 gaggaggcgc ccgagccta cgataacgct gccagaaatt ccgccggggcc aaggcgaaaa 300
 ctaattttct tctgtctccc cacaatgaca ttagcaccaa 340

<210> 1815
 <211> 433
 <212> DNA
 <213> Pinus radiata

<400> 1815
 ccgctatcct ttccattaca tcccacgtta ggtcacggtt tcgaaccctt gcacggccat 60
 tctctctgta agatgggtgag atctccctgc tgcgacaagg ttcataccaaa taacaaaggc 120
 gcctcgagca aagaagaaga cgagcgtctc atagcacaca ttgaagccca cggcgaggggc 180
 tcatggcgctt ctcttcccaa ggccgcaggg ctgctgcgat gtgggaagag ctgcagggttg 240
 cgatggataa actacctgcg tctctgatctg aaacgcggaa gcttttcaga agaagaagac 300
 gatctcata tcaaaactcca ctccctctc ggcaacaagt ggtcgcttat tgcagggaga 360
 ttgccagggc gaacggacaa ccgaaaataa aaaattactg gaacacgcac atgaaaagga 420
 aattgttgag cag 433

<210> 1816
 <211> 225
 <212> DNA
 <213> Pinus radiata

<400> 1816
 atcacagtgc gccctctgatc aaagaagaag ccgaatcaag gtgataattc tgcaaatctt 60
 gcagatgtag aaactcttct tctccaggtt gatgaacag cttctctgta tctgacagtg 120
 ttcccagggt ttgttaccct ttatgtacca tacgggttcc ccatatggca cactttttaga 180
 cccacaataa ctcaaacctc caatgtttat agccaacag ctgta 225

<210> 1817
 <211> 337
 <212> DNA
 <213> Pinus radiata

<400> 1817
 gttgctgctg cttctgtctc tgettctggt actgctgttg ctgctcttt gccagtgaac 60
 ggtgctgctg gggtcagatc tagtgctgat tcggagcatt cggatataga ggcgtctttt 120
 aaagaggcgc aatgcagatc ggccattggt gaaaggaggc ctcgaaacg gggcaggagag 180
 cctgccaatg gttagaaga acctctgaat catgtagaag ctgaaaggca gaggcgagag 240
 aagttgaacc agaggtttta cgcactccgc gctgtggttc ccaatgtgtc caagatggat 300
 aaggcctctc tgttgggtga tgcattctc tacatta 337

<210> 1818
 <211> 390
 <212> DNA
 <213> Pinus radiata

<400> 1818
 gttgttcga acgattgaaaa coagctaaaa caaagcgag gggattggag gattcgagca 60
 gtggtccttg gggcgagggt gatagaagaa gaagaaacct accatatata cacaatata 120
 ttatatcat agacacatgg gggctcgaa gcagaaatgg acttccgaag agggggagc 180
 tctcaagca ggtgttgaga agtatggcac tggcaagtgg cggaccattc agaaggacc 240
 tgagtttga cactgcctcg ccgctcgctt caatgtggat ttgaaggata agtggcgcaa 300
 tatgagtggt agtgcctagt gccaaaggtc aagggataag gtaagagact caagagtaaa 360
 agctattgccc tctctgcctt attcatcaag 390

<210> 1819
 <211> 367
 <212> DNA
 <213> *Pinus radiata*

<400> 1819
 attcaaaatg ggaagaagt tggagctgaa acgcatccaa aaccctaata gtccacgtga 60
 ttccctctcc aaatgcaaga ggggagctgt aaagaaatgc gtcaagctct ttgttctctg 120
 tgatgctgaa gttccctca tcattttatc tgaaccgcgc aagattttac agtttgcaag 180
 caacaagctg tgaactagctc ttgtgaattc ttctgatcaa gttagagatc catatactga 240
 tatataaag catactttca cattgcaatt ggagcagatc tagatgcaga agtgcaacct 300
 tattatacct aaagggccatc agctgcaaat caagacccat ttcttatctt ttgagatcgt 360
 gatacag 367

<210> 1820
 <211> 487
 <212> DNA
 <213> *Pinus radiata*

<400> 1820
 acgatcttca ccctcgggtg gctctctgct tatcccgatt cccagccaac tgctattata 60
 ttccggagtac tgaacttcca gaactggatc ctccaagcac caagaccatt ttctgagctg 120
 ttaagagatc tatgagtgat atggatcggt catcatcaga agattcagtg gattctcaag 180
 gtgatgtgaa tgcaaaactc aagatgggtt tctcggaaga tgaagaagat ctcataagca 240
 ggctgtacaa tctactgggc cagaggtggg ctttgattgc tggggcgaatt cccggcagaa 300
 ctgcagagga aatagagaaa tattgtagca ggcatatata tagtgagtac taggtcacat 360
 ggggtttctaa tagtcaatga agaagaaggg tagaagcagc cttgcctatc taactgattt 420
 aagtttgga tatatatatc gactttgagt gatggccata tcttctgggg tttataagga 480
 agtatgt 487

<210> 1821
 <211> 319
 <212> DNA
 <213> *Pinus radiata*

<400> 1821
 ttaagcatt tcattgagtc ttagggtcac gtttccaatc ctggcaggtc tcattattct 60
 gtctctctgc caagatgggg agaactccct gctgtgaaaa aggtcataca aacaaggcg 120
 cgtggaccac agaagaggac gatcgccctc tcgctcacat tcgagccac ggccaaggcc 180
 gctggcgctc gcttcccaag gccgcagggc tgatgcgatg cgggaagagt tgcaggctcc 240
 gatggataaa ctactttgct ccagtcctca gctggaaac ttctcagaag aagaagatga 300
 gttcatcatc aaactccac 319

<210> 1822
 <211> 320
 <212> DNA
 <213> *Pinus radiata*

<400> 1822
 gcaagagatt gcagattgctc ttggctgaac tatcttcgtc ccgatattaa acgtggtaac 60
 atttctccgc aggaagaaga gctcattatt cggttgcac gccttcttgg aaatcggtat 120
 gttagagatc gggggacatg atttattcat gcgccagaat ttacagattc ctcatcgaat 180
 tagtcatgca atgtttgtgc aggttggtctc tgatagcagg acgactgcct ggtcgaacag 240
 acaacgaaat caagaattac tggaaactc atagagcaa gaagccatgg ctgtcaatgg 300
 acgaattcca gtccaatact 320

<210> 1823
 <211> 338
 <212> DNA
 <213> *Pinus radiata*

<400> 1823
 gtcgagctcc ttgctgcgag aaaacccata caaacaaagg cgccctggagt aaagatgaag 60
 atgaagcaact cgttcgatat attcaagccc atgggagaagg cagttggcgt tcccttccca 120
 aggcgcgtcg gttgcagcgg tgtggcaaaa gctgcagggt tagatggata aattatctcc 180
 gtctcgacct caaacggggc aatttcagcc cagaagaaga tgagatcatt atcaaaacttc 240
 attctatgtt gggtaacaa ggttctttga tcgcaagcaa attgccaggg cgaaacagata 300
 atgagataaa gaattactgg aacactcaca ttaagaga 338

<210> 1824
 <211> 332
 <212> DNA
 <213> Pinus radiata

<400> 1824
 gccgaggtga ggaggcatta cgagcttctt gttgaggatg tgactgtgat tgagtctggc 60
 cgggttgctt tgcttgccta ttctgaaaat tctgtataac cgcccgaatt gatgtcagat 120
 cagttgggag atctcacaac acagcaggcg gtttctgtga aggtccctcc gcccaaggca 180
 tccgaacagg agcgcaaaaa gggcgtgcgc ttgactgaag aagagcacag actcttcttg 240
 atgggattga ataatatgg caaaggatg tggagaagca tatcaagaaa ctttctgggtc 300
 tcacggaac ctactcaagt tgcaagccac gc 332

<210> 1825
 <211> 301
 <212> DNA
 <213> Pinus radiata

<400> 1825
 accgtcgaga gagcttctata tctaaccaat aataacacct gtatgggttc atagcttcac 60
 agcaacaggg caccatgggc cgagctcctt gctgggataa aatgggagta aagaaggcgg 120
 cctggactct agacgaagat aaaatactcg tgcattacat taccaaacat ggccatggca 180
 actgcccgcg actgcccgaag caagcagggc tccctgcgat tggaagagat tgtcgtcttg 240
 ggtggacgaa ctacctgata ccgcacatca aaagaggga ttttatccca gaagaggat 300
 a 301

<210> 1826
 <211> 498
 <212> DNA
 <213> Pinus radiata

<400> 1826
 tttgcatcca attcttccctg tatcatctaa ttgctcagtc tagcaattac gcaatctcgg 60
 tccccagtc tgtctgacga agaggttaat gcaactgctg cctctgtggg caatctgacc 120
 ttgctgctgc atgcattcca gcgacgattg gaaggcaagg tcgcaataat aacgggcgga 180
 gcactctggca tagggagaagg catcggtcgg ctcttcacaa agcacgggagc cagagtcata 240
 atcgacagca ttgcagatga aacggcgcaa attctggccg aatcccttcc gactccgggc 300
 acttactgtg gctgcgatgt gagcaaaag caagacgtca gcgctgcggg ggatttgggc 360
 atggagaagt acgcgcaagt ggaatatcat ttaacaacg caggaatcgt cgatcagggt 420
 aatgtttcaa ggggagtgcc agagtacgag atggagcagt tcgacccgag tatgagcgctc 480
 aacgtcacag ggggtgatg 498

<210> 1827
 <211> 551
 <212> DNA
 <213> Pinus radiata

<400> 1827
 cgtggctctt cccggcagac ctagtaagcc gactactgta aatttattct tttagggtta 60
 cagaagaaga aaatacaaga tgggcagatc tctctgctgc tcaaaaagaag ggctcaaccg 120
 ttggggcctcg accaaaaagg aggatatgat tctctccgaa tacattcgaa ttcattggcga 180
 tggcgatagg agaaatatgc ccaaaagagc aggtcttaaa cgggtgggaa agagctgcag 240
 attacgatgg ctgaactatc ttccgcccga cattaaacgt ggaaacattt cccctgatga 300

ggaggaaactc	ataattcgcc	tccatcgcc	tcttggcaat	cgatggctgc	tatatagcagg	360
aagattacca	ggtcgaaacg	acaacgaaat	caagaactac	tggaaactc	atatgagcaa	420
gaagctgctt	ccattgaacg	aatctgaacc	caagactttg	cctgtcccca	agaggaggctc	480
gcaatctcct	tctccctcgc	aaaatcgagt	ctttaaagcc	aacctctgtg	aaataacaac	540
ggtggtcagt	c					551

<210> 1828
 <211> 256
 <212> DNA
 <213> Pinus radiata

<400> 1828	
ctgaaattcg	gatgccgaaa
agcaagccgc	ccgtgcttac
tcaattttcc	agaaaccgtg
ttcagcatgc	agccaccaga
aaaattattga	ctcagag

<210> 1829
 <211> 372
 <212> DNA
 <213> Pinus radiata

<400> 1829	
gcagattctc	aacagaattg
aatcattgaa	agtcgttgca
ggccgcggtt	ctgggtgaca
ttcccgaggg	ctcaaatctt
agtgattctg	ttccacaggt
cgactgctg	ccggatcatc
cggggcaatc	ct

<210> 1830
 <211> 486
 <212> DNA
 <213> Pinus radiata

<400> 1830	
agcgggtggt	gatttagccg
tggcgattga	tcctacctta
cactactact	gtcaacaacg
taactcgata	caaaataata
tcacatgaat	ccttatcatc
tcagctgtgt	tgcagtgagt
ttcgtgtgca	gtatgcaaac
gttaactctg	ggacgtgtgc
gtgctc	

<210> 1831
 <211> 330
 <212> DNA
 <213> Pinus radiata

<400> 1831	
gtttttccgc	aggaagtttt
ttgtccagga	aacctagacc
ggcacccgta	ggcgatggct
ttcaactcag	ggcgctcagg
catggaaaaa	agttcgtctt
cttatgacac	tgccgtcttc

<210> 1832
 <211> 413
 <212> DNA
 <213> *Pinus radiata*

<400> 1832
 aaatctgact atcgggatag tgatgatgaa ggaggaggta ctgttcgaga aggaaggat 60
 ctgcaaacct caaatctcat cgattatttt ggtcaaaagta atcatcacaga agaagcagaa 120
 aatgagcatg atgcatcagt ggataccaaa gggccccctgg aatccagcaa tgaagtccgc 180
 catccctacca catacccega atcttcttca ttgtcagcgc aaggctctga gctctcagtt 240
 ttttctctga attactcgca gagaaaaattc tacagctcgc aggccttagg aggcctcag 300
 aatgctcaca agcgagaaag caccttgcca aagagggggc aaagaattgg ggccttttcaa 360
 cacaggtaca taagcatggc atccctgctt ctccatggct ctacagaatc agc 413

<210> 1833
 <211> 260
 <212> DNA
 <213> *Pinus radiata*

<400> 1833
 gctatttgca gcaatttctt ccatccgtac ccaaaagatg ctgacaaaca ttactagca 60
 agacagactg gactgaccag aagccaggtt tcaaatggg ttataaatgc acgtgtccgc 120
 ctttggaaac ccatgggtga agaaatgtat atggaggaaac tttagagaggc cgaacaacag 180
 aatcatgcag cagattcgaa ggtaacaaca gaaagtggct aaaaacaatga agaaacgggtg 240
 tcaagggaag gagctgggaa 260

<210> 1834
 <211> 338
 <212> DNA
 <213> *Pinus radiata*

<400> 1834
 aattgaatcg gccatgggtt tgtatgaatt gttacatgta cagcagattc agcaaatata 60
 gcagcagcag tttcaattgc aacaacaaca aatagcagca ggcggttcaa tccaccatat 120
 gggctcgaac cctctgggtc ccagagctca gcccatgaaa ctctatggca gcagcctatc 180
 aaagccggct aagctttaca gaggcgtgag gcagcgccac tggggtaaat ggggttcaga 240
 gatcagggtta ccagagaaca gaaccaggtt atggctgggg acttttgata ctgcagagga 300
 agcgcccatg gcttatgaca aggtcgctta caggctga 338

<210> 1835
 <211> 240
 <212> DNA
 <213> *Pinus radiata*

<400> 1835
 gcttatggga atgcctgaca ctaactatgg aagcgaaacag acaaatgctt gcaaaaaaca 60
 gaaaagaata cgttccaaaga attcaggaga agatgggtgaa gatagacaga gataacatcc 120
 ttctatgttt actgagcccg gtgaacttgc aagaggggaaa aagaatgggt tagactatct 180
 ctttgatctt tatgaacagt gcgggaaatt tctgtggat gtgcaacata ttgcgaagga 240

<210> 1836
 <211> 349
 <212> DNA
 <213> *Pinus radiata*

<400> 1836
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 cctctaaagt gtccacagtgt tagaacaaga gggttaacact aatctcgcac ctttcttacc 180
 ccggttcatg gaagcattaa actattactc atcagtggtt gagtctctag atgctacaat 240
 tccaagggat agtagagatc gtatgaatgt tgaaaaacag tgccctggcc gagacatagt 300

gaacataatt gctttgtgag ggggaagaaa ggggtgagag gtatgaagt 349

<210> 1837
<211> 457
<212> DNA
<213> *Pinus radiata*

<400> 1837
gaaaagtatg ttcaagtttt ttccattcaa acatatccct gttggaggga ttccgaaccg 60
tctccggtcg tcttcaacca gtctgacccc aactcgagat ctcttgtagt ctcaaatgat 120
aaatttttca agaattggcta attcgaatcg aggatgcttc atatgcggtt ctgaggatca 180
tcgaaaaagcg cagtggtccca caccgcgcaa acttacctgt tatcagtgcg gttggagtg 240
ccatcagtcct cgggtcgctt ctctcccgca gaagcgcaaa acctgctaca aatgtgtgta 300
agaggggccat actctctcgcg actgttccaa tgcgcccaacc tctgagtatt ccggtgtgta 360
ttccggcacc gaattgtata aatgtgttaa attggttcac atctctcgct cctgtccgac 420
aaatgagtca actgctgact atgctagggc tcttagc 457

<210> 1838
<211> 395
<212> DNA
<213> *Pinus radiata*

<400> 1838
ctgaaatc gttaaattca ctcttttggg ttcagttact ggcgtcgcaa tatggaaaaa 60
ctccccaatc agcaacctga ccttgaattt gctcaaacac acgaggatcc cgggtcccg 120
caatttaagg gaattcgact gcgaaaaatg ggaaggtggg tatcggaat cgggataacc 180
aaatctcgag agaaaaatag gctgggtcct tacacgactc ccgagcaggg tgcctgctct 240
tacgacgcgc cagtggtatg tctgaaaggg ccacacgcca aatccaactt tccggaaacc 300
gtgcacgaca ttcggtctgt gacttctgtt tcccgtcagg aaattcagac cgctccctc 360
aaatatgctt tgggccagcc cctccgagt ttgca 395

<210> 1839
<211> 395
<212> DNA
<213> *Pinus radiata*

<400> 1839
gctaacacag cctttatata tcatcatggg aagcttcttg cacttcaaga ggcagataaa 60
ccttatgcac tttagagtcct tgaggatggg gatttgcaaa ctcttgggct aatgattat 120
gataataaat tagcacactc ctccaactga catccaaagg ttgacctgtt tacaggggag 180
atgtttacat ttggttacca acacaagcct cctattttaa cttaaccggg ttgtacaaa 240
gagggaaata tgcttgatcc agttcctata acacttccca aacctgtcat gatgcgatc 300
ttgccaataa ctgataacta tgcaatcttc atggatcttc ctctctattt ttctccaaa 360
gatatggtaa aaggtggact catcatgtct tatga 395

<210> 1840
<211> 468
<212> DNA
<213> *Pinus radiata*

<400> 1840
ctcatttcag tgattcactc actgaaatta ttgttagaat cactgttttg gccccagagc 60
ttctgcgtcg ccaaatatgg agatacgctt ccagcaggaa aacgaccagg acattgtctc 120
gccacacgaa gatcgcggtg ccgcaccaat taaaggagtc cgaccgcgta aatgggggat 180
atgggtatcg gaaatccgga tgcgcgagatc tcgacagaaa atatggctgg gctcgtacaa 240
aaagcccgag agggcccgcc gcgcctaaga cgcgcgagtg tattgtctga gagggctgaa 300
cgccaagtct aatttcccca attctgtgcc cgacattcgc tctggtctct ctcttcccg 360
ccagcagatt caactcgctt ccgcgaataa tgcgttggat cagtcctctt caagcccgcc 420
gtctctgaac aataataaag aggaaccgcg gtcaccgtcg cagtcgtc 468

<210> 1841

<211> 378
 <212> DNA
 <213> Pinus radiata

<400> 1841
 aaacaatata gtcgacattg ttgcagcatc tagagctatt cgtgaaccac gtgtagtggg 60
 acaaaacaacc agtgaatttg acatccttga tgatggatat cgtatggcgca agtatgggca 120
 gaaggtgggtg aaaggaatc caaatccaag gaggttactat aaatgcacaa atgctggatg 180
 tccagtggagg aaacatgttg aaagagcatc acatgatcca aaagcgggtga tcacaacata 240
 tgaaggaaag cataaccatg atgtgcctgc tgccagaaac agcagccatg ataagtctgc 300
 aaaagggaat ggggcagctc ctctagcaat gcagaataat gtcccagcgc ctatgaatgc 360
 tataccacga cctgttcc 378

<210> 1842
 <211> 382
 <212> DNA
 <213> Pinus radiata

<400> 1842
 ctcccacctc catttcactc tgccgagtc attactctcc ctatcgtcga accacgtctt 60
 tctcatcgac caacaatgac tcagcagaca acctcaccac cagtttagtcc cggcgcactt 120
 gctcttccca ctctctgctc atccacatct gcaaaagtctg cagctgttcc agtaccagcc 180
 caagccaacc ctccgaaacg tctctggttc gatctctccg cagaggagaa gcgagagggt 240
 cgtgctcatc ggaacagaat cgcagctcag aactctctgc acaaacgcaa acagcagttc 300
 actagtctcg aacaacgagt catcgacctc gagaacgaga accgccaatt acgagacgct 360
 ctcgccactt cgcagccgaa cc 382

<210> 1843
 <211> 314
 <212> DNA
 <213> Pinus radiata

<400> 1843
 catagaaga gctttatgtg tcttgaattt gaacctctc ctctgtttta agaattccgag 60
 ctttgcaaac acgctctgag ctgagctccg gaatacccca gcaacaatcc gacatggcta 120
 aatcctcgca aaaccagaac ccccgcaaca gacgcgaaaa cgccttacgg aagtacggcg 180
 agttcaaggg aatacgaatg agaaaaatgg ggaatgggtg gtcggaaatt cgaatgccca 240
 attccactgg gagaatttgg ctaggctctt atgacacgac ggaatgggtg gcccgcgccct 300
 acgattttgc ccgg 314

<210> 1844
 <211> 384
 <212> DNA
 <213> Pinus radiata

<400> 1844
 cgggttctta gttcgaatcc ttgccctaac gcagtcctcg gttttaagac tcaattctta 60
 gtgactcccc cgcaacatgg ttaagccctt gccaaaacag agcagcccgga gcggatcgga 120
 aaactgccaa ataaagtctg ggcagttcaa aggaattcga ctgagaaaat ggggggaaatg 180
 ggtgtcgga attagaatgc cgaattccag ggccaaaatc ttgctgggct cctacgactc 240
 cccggaaaaa gctgcgccgc cctacgactt tgctgtgtac tgcctaagag ggtcgaaggc 300
 cacattcaat ttcccgact ccccgccgga aattccatgc gcctctgacc tgcgcgcgc 360
 gcaatttcaa gccgcgcgg ccag 384

<210> 1845
 <211> 171
 <212> DNA
 <213> Pinus radiata

<400> 1845
 acatcccgct ttcactttgt tgatcaacaa ttacgacaac agcagactct tcagcagcta 60

ggaatgatac agcagcatgc ctggagacca caaagagggc ttccagagag gccctgtttc 120
attctccggg cttgctatt tgagcatttc cttcatccgt accccaaaaa t 171

<210> 1846

<211> 436

<212> DNA

<213> Pinus radiata

<400> 1846

agattgatca aacacaaata ccgtaaaatc gcagcgaaga tccaaaattc caccatgggg 60
actgtggcgg aagatggcag caagggttac acggccgtaa atccccatcc caaaaggggc 120
gtcgctcgtt ggcctggtgga catggtggag aaactggtgg ttgaaacttc tgcgttgtat 180
agttcgaaga agcctctgtc ttctcttttg gggaaacttc ctcagctctc ggaaactgcc 240
cccaaatcgc acctgcctatg ttgtggggcaa tctcttagtt gcttggatgg agagtctgtg 300
cgcgttggtc ccaatccgaa attcgcacgc gtatgctggt atcactggtt tgatggagat 360
ggaatgatcc atggtctgag aattaaagat ggttaaagcca catatgtgtc acgttatgtg 420
aagacatcac gcttga 436

<210> 1847

<211> 303

<212> DNA

<213> Pinus radiata

<400> 1847

ggaggcgagc cattctttgt tccccgctcc tcggatcttg cggcgccgga agacgatggc 60
tacctctca cattcatgca caacgaggag acctcgaagt cggagcttct tatattggagc 120
gccagatctc gcacctgga acccggtgga acggttaagc tgcgctccag agtcccatc 180
ggattccacg gcacattcat cactctgaa gagcttgcca agcaggtgac gtgaagacgc 240
gctgtcttcc gccctcttct ctctcttgat taccctacaa cactcgggtc tgtactttct 300
tta 303

<210> 1848

<211> 551

<212> DNA

<213> Pinus radiata

<400> 1848

gcgatttcga gtgctgtaag caggcaacga cgcctgtttt gcttttagagt ttaacagaaa 60
agaagaatgt gtggaggtgc tatcatctcg gactttataa tacccccctgc gagccgagggc 120
cgccgggtga ctgccaggga tatatggccc gatttttgata agttctctga gttttatatt 180
ggaggtgctg cgttgagatc ctttgatgct agcgttgatg tcatgacga caggaggatg 240
tccgacgatg acgagttctt cgattttgag gagagctatc agaacaagaa gaagaagcag 300
caacagccga tatccccacc caagggtttc gagcttctct tagctcgggg ctttgatgga 360
ccggcgggca agagcgcggt gagaaagagg aagaatttgt tcagaggagt caggcaacgt 420
ccatggggga aatggggtgc agagatcagg gatcccgaaa aaggcgctag ggtttggctg 480
ggatccttta atacggcgga ggaagctgct cgggcttatg atcgagctgc acgaaagatc 540
agaggttaaga a 551

<210> 1849

<211> 527

<212> DNA

<213> Pinus radiata

<400> 1849

gaacagtcga gcctcgttgc accctctcga gtcaccacaa acagcactgc agcgaaagga 60
caagggcctg ctgactactga gtctcaacca gacctaaactg ctgccagaga gccctcaatg 120
gagcccaaga aaccgccaa gaaagaaaggt cagaaacgaa acaggagacc cagatttgca 180
ttcatgacca aaagtgtgtt ggatcatttg gaagatggct atagatggcg caaatatggc 240
caaaaggctg tcaaaaacag ccctttcccc agggattact atcgttcgac aaatggaaaa 300
tgctcagtgga aagaagaggt ggagcgttcg tcagaagatc caggaaattgt gattacgaca 360
tatgaaggac agcattctca tccaagcccg gccatattgc gtgggtcagc agaattcccaa 420

tcccactttt	cagatcaaag	attgaattct	cccttcactc	aaacgccatt	gatcagattc	480
ctccccacc	caatgatgat	gagtagtact	aaccaggctc	cagctgc		527

<210> 1850
 <211> 226
 <212> DNA
 <213> Pinus radiata

<400> 1850						
gagagagggt	ggaagtacag	caatagaaaag	tgacttgaaa	agtgaataac	ttgaagaaaa	60
agaagcggaag	gcaagtgaata	atgaagataa	gatgctgaaa	aaaccagaca	aattgttacc	120
ttgtctctgc	tgtgacagtt	tagataccaa	attctgctat	tacaataatt	acaatgtgaa	180
ccagcctagg	catttctgta	aaaattgcca	gagatattgg	actgct		226

<210> 1851
 <211> 236
 <212> DNA
 <213> Pinus radiata

<400> 1851						
atggcgggag	accacgcttg	ccccgtctgc	caagcgactt	ttactcgccc	gcaacatgtc	60
gcaagacaca	gcaagtcaca	caccggcgac	cgcccgctaca	agtgtcccat	ctgcaaccga	120
tcgtttggcc	gcagcagcct	cctgaagcga	catgagaaga	agatgcactc	aaacggcgag	180
agcgcgacga	gcagcggcac	tgggcccagg	cagaacaaat	ttgatagcca	gtttac	236

<210> 1852
 <211> 455
 <212> DNA
 <213> Pinus radiata

<400> 1852						
ccacaacgaa	taaatgcaaa	tgctgttctg	gatagctgaa	cccaccaact	catcagcata	60
aatttctcca	gcagaaatcc	agcctccac	tcgcgcgcac	aaatttcttc	aacggaaatc	120
cagccggccg	ctaaattctc	tgcaactgac	aaagcccaca	ggctaacaga	ttccgacatg	180
gatcgcccca	ttccctggcc	atctgcatac	acagaaatct	agactttgaa	aattctttct	240
aattctgtat	ggagccctga	actgtagggt	cagggttcga	ttaccgctat	ggatgaggcc	300
gcgcctgcga	aggctcctct	ccccgtgac	tactgtggcg	aagcgaaatg	agttctctac	360
tgccgagctg	actccgcaca	gctctgcctg	ccatgtgacc	accacgtcca	ttctgccaat	420
gccctgtcca	agaagcatgt	ccgatccacg	ctctgt			455

<210> 1853
 <211> 324
 <212> DNA
 <213> Pinus radiata

<400> 1853						
cttgaatggt	gttgcatgtg	agggatcaga	aagattggaa	aggccagaaa	cttacaacaa	60
gtggcaggga	cggactcagc	gtgctggatt	tgtacagctt	cctctggatc	gtagtattct	120
ctctaaatcc	agggataagg	taaaaaacat	ttctatcata	aggattttgg	agtggagcaa	180
gatggtaatt	ggatgctatt	gggctggaag	ggaagaacta	ttcatgctct	gtctacgtgg	240
agaccttcga	catgatttgg	cgatggagaa	tttttctctc	tgcaaaagat	aaggcatgat	300
acatatattgt	gattctgcga	aggc				324

<210> 1854
 <211> 316
 <212> DNA
 <213> Pinus radiata

<400> 1854						
acgggctctc	caacaattag	gcatgattca	gcagcatgct	tggaggccac	agagaggact	60
tcccgagcga	tctgtttctg	tcttacgggc	ttggctattt	gaacattttc	ttcatccgta	120

tccaaaagat	gcagacaaac	atatgctcgc	gagacagact	gggcttacca	gaaatcaggt	180
ctcaaatgg	tttataaatg	cacgtgtacg	cctctggaag	cctatggagg	aagagatgta	240
tgtggaggaa	acaaaggagg	cagaagtaga	ccatggatca	aatgataaaa	caggtaagga	300
gagtggcgag	aaaaaa					316

<210> 1855

<211> 393

<212> DNA

<213> Pinus radiata

<400> 1855

cggaataatca	cccccttgccg	ttgcgcacca	tgcggccgac	gtaccgaagt	agcggacacg	60
gttcgtaaat	attgtacagg	cgcgcgccca	ccccccacgc	gacgacagac	acacattctt	120
taacgatacca	tctctctctt	gacgaaacct	ccaccccaaa	cgattgacga	tgccccaggc	180
ggacagccag	agcggatccc	gagattctac	ggctggccccc	gctcaaggta	cgctgaaggc	240
gaaccaggcg	tgccaccaat	gtaggaagcg	gaaactgaaa	tgcgacgcca	aaagaccttg	300
ctcgacttgt	gtgaggtcac	acaaccacgc	catcacccac	gctggtccag	acgctgtttt	360
gcgcgccttc	cagaatgta	cctttgacga	agt			393

<210> 1856

<211> 359

<212> DNA

<213> Pinus radiata

<400> 1856

ggaaagtcca	acatagaat	cttctgtgca	ttcatagaat	aaatattcta	caggctgcac	60
tgtaatctag	gggagaatc	gaataaaata	tacatttgtt	tgtttacgat	ggagttggca	120
gatgagcatt	ccatctctcg	ctataagaaa	cccaagctct	ccaagaatgt	cggttccgag	180
cgcccgcaaa	ggcagaaaat	gaacaagctt	ctctacactc	gtggggctct	gggtcccaat	240
atttccaaga	tggacaaggc	atcgatttta	gcggacgcca	tcgaatatgt	ggagaagctg	300
aagcaacagg	tggagagagc	tgagtctgac	gttcaatcca	ccaacgtctc	ggctctatc	359

<210> 1857

<211> 459

<212> DNA

<213> Pinus radiata

<400> 1857

ggaaggcaat	gagagtgtac	tccatcaagg	aatgaagaag	gcaaggcgtg	agagaggatc	60
aacagcaaa	gaacggatta	gtaaaatgcc	tccctgtgct	gctggaaaa	ggagttctat	120
ctacagaggc	gtcacaaagg	atagatggac	aggacgatat	gaagctctac	tttgggacaa	180
aagtaacttgg	aaccagaaac	aaaataaaaa	gggcaagcaa	gtgtacctag	gtgcctatga	240
tgaaggaggag	gctgcagcca	gagcttatga	ccttgccgct	ctgaaatatt	ggggtcctgt	300
aactctcaat	aatttttctg	ttaagtacta	tgtctagagat	attgaagaga	tgcagagcat	360
ttcaagggaa	gatttctctg	cttctctcag	acggaaaagt	agtgggtttt	caaggggaat	420
gtcaaaatac	ccgtggactg	gccaaagcaat	cacaaactg			459

<210> 1858

<211> 368

<212> DNA

<213> Pinus radiata

<400> 1858

aaaaaggcgt	cagaatgggg	tgagttctgta	gtaagtacaa	gcgaaaaacag	taagtacttg	60
gatcctctcta	cttattctga	aaacctcttc	cctgctcaag	gatctgatcc	tcgggttttc	120
ccctgttaatt	tctgtcaaa	naaattctac	agttctcaag	catttagagg	tcacaaaaat	180
gcccaataagg	gtgaggaac	tttgctctga	agggcacaga	gaatggggtc	ttttgcacaa	240
agatatctcaa	gcattggcatc	acttccactc	cacggtttct	cggaacacaa	ttggacgcgc	300
agtcggtttt	tagggataaaa	agcacattct	ttgattcaca	aaaccttccc	tgaagggtgat	360
aaactgccc						368

<210> 1859
 <211> 497
 <212> DNA
 <213> Pinus radiata

<400> 1859
 ggcaagaccg tctggaagag gatgttacgg gaagagagca aaagcggttac cgtgtctgcg 60
 acccggaagct ttcggagcga accgtggttag taatgggggc agaccgcgac gaatccggag 120
 tccgtctcgt gcacacgctg atggcctgcg cagaagcggg gcagcgcggg aatttggcca 180
 tcgcgcggga aatggtgaaa gaagtggaaa ttctgggttc agcacagggc ggggcaatga 240
 gcaaggtcgc cacatatctt gccgaggctc ttgcccgccg aatctatggg ttctccctc 300
 aggaacacct gcggttcaac cagaacgacc ccttgcgcga tttctgcaa ttctcttctc 360
 accaaaacct cccctatctc aaattcgcgc acttcatagc caaccaggcc attctggatg 420
 ccttctccgg gcaccaacag gttcatgtca tagatttcaa tctgaaacag gggatccaat 480
 ggcggcctt gatacag 497

<210> 1860
 <211> 254
 <212> DNA
 <213> Pinus radiata

<400> 1860
 gaggtaggag cggcgccgga ggcaagggaa gcccgtagc aggcgtcagg atgagaaaaat 60
 ggggaaaaat ggtttctgaa gtgagggagc cgaacaagcg gtctcgcata tggctcggtc 120
 cctattccac tcccgaggcc gctgccaggc cctatgatac tgcggttttc tacctcagag 180
 gaccctccgc gacctccaat ttcccccagg aagcacgtaa ggagcagcag agcgacctca 240
 ggctttcgca gctc 254

<210> 1861
 <211> 515
 <212> DNA
 <213> Pinus radiata

<400> 1861
 catcttctcc ttacaaaaagt agctccctc ttgactccag gcggtctctc cagtcataaa 60
 cgatacggat taccaccaag caccctatgt ctctccacctc atcgtattct tctccctccc 120
 ctgacacacc atcacagctc gccgctgtgc gcccgacatc taccgcgagc gattctctcg 180
 tcatggaacc tccacgtaag cgagccaggc ctgatcttaa cgctgaacag cgaagagagg 240
 ccaggggcca cgttaatcga attgccgctc aaaactctcg cgataaacgc aaggcgcaat 300
 tcacttacct ggagcagcgc gtggcacaac tggagggaaga gaaccaaaga ctacgagcag 360
 gcatgggctt ctctcaattc acgccagccg acaacgacaa gttctgtagc ctacgagagag 420
 aatcagtaaa ggcccgcgag aacagagagc tcaaggagag gatcaagagt ctagagagcg 480
 ggtggtcggc cgtcatcaaa gcgttgtagc cctca 515

<210> 1862
 <211> 532
 <212> DNA
 <213> Pinus radiata

<400> 1862
 agtttgctgc tctacacctg tgggtgcaag cgtttggagc ttcaagagcg aaggtttggg 60
 ctgtgattaa ttcatggcgg cggcgccgac gactacgttg ggttgtagca aggtggattt 120
 gatacggctc atgcggctgc gagagcttac gacagggcag ctatcaagtt tccaggagtt 180
 gaagctgata taaattttac tctaccgac tatcaagaag atttagacca gacgagcaag 240
 ctctctaaaa aagagtttgg gcatattctc cgtcgtcaaa gtaactggtt ctctcgttga 300
 agttccaagt atagaggcgt taccctgcac aagtgtgggc gatgggaagc cagaatgggt 360
 caattcctag gaaaaaagta tatatatatt ggattatttg acagtgaaga ggaagctgca 420
 agggcatatg ataaggctgc tatcaggtgc aatggaaaag aggcagtaac gaactttgat 480
 cctagcttat atgaaaaaga aattcttgaa gaaagaagag agagtcagac tt 532

<210> 1863

<211> 497
 <212> DNA
 <213> Pinus radiata

<400> 1863
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 ggaggcgata gacctacttg aaaaatggagg tgtctgcgaa gaagcgaaaag gccgaagaag 120
 cgaatggcgt ggtcgatata gccgtggagg atgctcggaa aatggttgaa cccctcacc 180
 gagagcaact attagatatt ctgcaggagg cggcgacgca gcacctggac gtattggagc 240
 aggtgcgcgc catcgcgagc aaggatcctg cgcagagaaa gctgttcgtc cgtggccttg 300
 gctgggatac aaatacacag tctctcaagg ccctcttttc ccagttcggg gaactggagg 360
 aaggggtcgt cattatggac aagaacacgc gtaagagtaa gggttacgga ttcgttactt 420
 tcaagcacat ggacggtgct cttaatgcc taaaggagcc cagcaagaag atcgacggcc 480
 gcatgactgt cagtcag 497

<210> 1864
 <211> 308
 <212> DNA
 <213> Pinus radiata

<400> 1864
 tgcttagatg gagtttactg ccgaaatgga gcgaatcccc ggttcaaacc ccgaggaggc 60
 caccatttat ttgacggcga tggaaatgata catgccttga cgtctcgaca cgggaaggct 120
 agttacagtt gccggttcac ggagcccgaa aaggctcatt agcgaggaa cggcgaggcg 180
 gcagttttac ccgaagccca tcgggcaact ccacggccac ggacgggctg gtgcgcctgc 240
 tgctgcatgg tgcccggggg ctctgcggga ctggtcaaca ccgggaaggg catggcgctg 300
 gctaatac 308

<210> 1865
 <211> 395
 <212> DNA
 <213> Pinus radiata

<400> 1865
 aagcgggtggc agattgttca caatgatttc aagtggcgct ctttcttctg cagcagagat 60
 ttgaaaggca tatcagctgc tcttggttgc tactccttcc aagaaaaat ctcattttat 120
 gacttatcaa acggttctta atgtagcaga gggagaaacg aggttgacac ttgttgattt 180
 cggaaattctg tatggttttc aatggccttc tctgattcaa tgcctggcaa atcgtcctgg 240
 tggctctccc atgcttcgca taactggaat cgagtttccc caacctggat ttagaccagc 300
 agagagaatt gaagagactg ggcgagact ggaagactat gcaaaatctt tcggtgtgccc 360
 ctttgaatac caggctattg caacaaagtg ggaga 395

<210> 1866
 <211> 340
 <212> DNA
 <213> Pinus radiata

<400> 1866
 gttacactga aaattgaaca cttctcacc agcagttctg atatgaaaa actggagatc 60
 gaagagtgg ggagtcacca ggtgatgta aaatctttgc ttattgaatg tgcataagct 120
 attgcagacg gtcgtaatgc agataatttg attgcagggc tgagacaagt tgtaaatata 180
 tatggggatc cattgcatag gttagctgca tatatgtag aaggtcttgt agcaagggtg 240
 catttctcag gaggacata ttacaaaacc ctaaaatgca aggagcctac cagttccgaa 300
 ctcttctctt acatgcata tctatatgaa gttgtctct 340

<210> 1867
 <211> 398
 <212> DNA
 <213> Pinus radiata

<400> 1867

cttttcaaga	agtggaaaag	ggtgcaaat	ggaacccttt	ccagaagctg	gcggccgcag	60
ttcttgatgc	ggcggaggac	accttggttc	gtccgcttga	gaagcaacgc	cogttgcccc	120
acacatccga	cccaacgggt	caactgtgcg	gcaacttcgc	gccggtgccg	gaaacgcnaag	180
tnaagcatga	cttgagggtc	gagggccggg	taccggagtg	cttagatgga	gtttacgtcc	240
gcaatggcgc	naatccccgc	ttcaaaccgc	gcggccggca	ccatttattt	naaggcgatg	300
gaatgataca	tgccgtgacg	ctgagacacg	ggaaggctag	ttacagttgc	cggttcacgg	360
agaccgaaaag	gctcgttagc	gaggagcggg	cggggcgg			398

<210> 1868

<211> 200

<212> DNA

<213> Pinus radiata

<400> 1868

aattgcaaat	cttgacagtt	caatcggtaa	atcaatgaaa	agcatctcag	atttataccc	60
catgtgctaa	ttctatgagt	gggttttgg	tggtgtgga	gcgcactgca	ttctacttcg	120
gaaaaaata	tggatgcaga	gcactttcct	gtaggtttct	ttaggtggga	taagagacca	180
gcaccagttg	tagcgagcgc					200

<210> 1869

<211> 286

<212> DNA

<213> Pinus radiata

<400> 1869

ggatagtcca	gagcgggtga	acgtggagaa	gcacttcttc	gcagagaaaa	taattggggat	60
tgtagctttt	gagggagccg	aaagaaaaat	cagactggaa	ggaagagatc	agtggcgat	120
tgtatggtaa	tcagcgggat	tcaaatttac	caattttaag	cattatgcaa	ggagccaagc	180
tcgaattctt	ctctataatt	attgtgaagc	gtatttctta	gatgaatcgt	cgggggtttt	240
ctctttggca	tggcaaaatc	ggccctctct	caccgtctct	agcctg		286

<210> 1870

<211> 301

<212> DNA

<213> Pinus radiata

<400> 1870

ctatacctcc	gcctcttggc	aatttcaggc	tctttcttcc	tgatttttca	gacagtgtac	60
agtcgcgata	ttcacacaag	gccgccatta	tcacttatct	tcaagaagc	agttagccaa	120
acaagcaaaa	gcggaaaaac	tatgggaaag	aagaagaggn	aggcccccac	gggtctgggt	180
tattactgtg	agccgcaggt	cgntgatgaa	aagatattgg	ttcagcaccn	gaaggccaaa	240
catttcaagt	gccatgtctg	ccacaagaag	ttgtctaccc	gctggaggca	tggccatcca	300
t						301

<210> 1871

<211> 301

<212> DNA

<213> Pinus radiata

<400> 1871

ggctgcacca	ctgtagtaga	aactttagcc	aagtggcagg	agctgaacag	ccagggtggaa	60
agctcaaaa	atggcgccga	aagactcagg	aaagccctcg	ccaaagggtc	aaagaaaggt	120
tgcattgaa	gaaggggtgg	tctgtataat	ggacgttgca	actatagagg	agtcaggcag	180
agaaactggg	gaaaatgggt	tgccggaatc	agagaaccga	atcgtggaag	tcgactgtgg	240
ttgggtacgt	tctcttcagc	ggaggaggca	gcacgtgctt	atgactcaggc	tcgagggggt	300
a						301

<210> 1872

<211> 447

<212> DNA

<213> Pinus radiata

<400> 1872
aagaacaccta cttggggcga gagctcagcc catgaaactt tctgctaaaa atgattcaaa 60
actgggtatt gcaaggcctg ccaagctcta cagaggagtg agacagaggg actgggggaa 120
atgggttagca gagatcagat tacctaggaa tagaaccagg ctctggcttg gaacttttga 180
cacagcagaa gaagcagcgt ttgcatatga cacagcagcc taccaactac gtgggtgagta 240
cgcaaggctt aattttccgg acttgaggta tcttttgctc tcaaatccgg ataacggtag 300
ccataatgtt ctttccggcc cgggtaatgc gttatctgtg ctgaaactct ctgttgatgc 360
aaagctccag gcaatttgcc agcgctttatc ccaggaanaa tcttcagaaa atcgctctgat 420
ggcacacagt gccacaatg aagctct 447

<210> 1873
<211> 311
<212> DNA
<213> *Pinus radiata*

<400> 1873
gaagatggca gcaagggtta caaggccgta aatccccatc ccaaaaaagg cgctgcctcg 60
tgggtgggtg acatgggtga gaaactgggt gttgaaactt ctgcgttgta tagttcgaag 120
aagcctctgc atttctcttt ggggaacttc gctccagctc cggaaactgc ccccaaatgc 180
cacctgcctg ttgttgggca acttctcagt tgcttggatg gagaagtctg gcgcgttggt 240
cccaatccga aattcgcacc ggtagctggc tatcactggt ttgatggaga tggaaatgatc 300
catgggtctca g 311

<210> 1874
<211> 383
<212> DNA
<213> *Pinus radiata*

<400> 1874
ttctgccecg ttttttccct gcactcacca ctcccatcgc cattgctgga accctagaag 60
accagctctc ttctttttta actcaggagt taaatcgcaa tacaaaaactc ctgtgctgga 120
ctctatttga tcatagtatt cagcaagaga ggccatgggg cggggaagaa tcgagctgaa 180
gaagatcgaa agcacaagca acaggcaggt gacgttctcg aagcggcgga tgggggttgc 240
taaaaaggca caggagcttt ccgtcttatg cgatcgagag gtcggcgctca tcatattctc 300
taataccggc agactcttcc acttctcgag ctccagtatg gagaagatga ttgaaacata 360
ctatcgattt attgaaaaaa atg 383

<210> 1875
<211> 235
<212> DNA
<213> *Pinus radiata*

<400> 1875
agagattcag ggggtgtgag aggagatcgt gggggaaaat ggtagcggag atcaggatgc 60
tccgatgcgc atcccgcgta tgggtgggat cctaccacac tgcagaaacg gcagctcggt 120
cctatcgatg tgctctcttc tgctacagag gtccctgctg tttccctaac ttccctgaat 180
ctccacctgc tcagtttctc ccatatcccc tgcgcctctc tcatgatatt catct 235

<210> 1876
<211> 416
<212> DNA
<213> *Pinus radiata*

<400> 1876
gattgtatga gatatcagaa aataaaactg atttttaattc tgcaggcatc tcagaaaaac 60
aaaactggct ttacttctac aggcattctca gaaaaataaa ctgggtttac ttctgcacag 120
atgtcagaat aacaaaaact gttttacttt tgcagacatc tcagacaata aaactgggtg 180
gttttagtac ttgccagac atctgagaaa aacaaaaacc gttttacttc tgcccgccgt 240
aaggttttac aagcttgaat tcaaaactta taactgggcy ctgtttatat gtcccaacga 300
aaatgtgagg tctacacac gctgacgcgc gacgtcgtcg ccagttataa acgtaccatg 360

gaagccgtag ggcacccggg agggcagttt gacggaggcc acgacgtcga ggcgcc 416

<210> 1877
<211> 320
<212> DNA
<213> Pinus radiata

<400> 1877
gcacaatgtt gaaggggtgg atagagggtc tnatgttgat cacaaagagt ttctcagagg 60
gattggaggg tggagaatga gtatgccaaa gctctgtgat gtttgtcagg tatcaagctc 120
tgtaatatat tgcagagctc ataactgcaca gctttgtcta gtctgtgatg ctaaaattca 180
tgggtggtagc aaggcttcgt tgtgtcatga aagagtttgg gtttgtgaag natgtgagca 240
ggccccagct gtgtttacat gcaaggcaga tgcagcagct ttatgtgtag cctgtgatac 300
tgatatccat tctgccaatc

<210> 1878
<211> 456
<212> DNA
<213> Pinus radiata

<400> 1878
ctttggattt catgggtcga tttcaactgac tccgccgtga aatatcacta atttcgcttc 60
agagtttctg caatatgtcc aatatggag aattttcccg agcaggaacc tgataatgcc 120
attgtcttac cacacgaaga tccggttccc cgcacattta agggaatccg actgcgaaaa 180
tgggggagct gggcatctga aatccggata ccgagatcca gaaagaagat atggctctggc 240
tcatacacta ccccgagaga ggctgcccgc gcttacgacg cccgagtgta ttgtctgaga 300
gggcgcaatg ccgaattcaa cttttctgtc cctgacatc cgcactcgtc cccctcttcc 360
cgtgagcaaa ttcagcatgc cgcgcgcgaa tatgcgttga gccaggcccc ttccagtttg 420
gcctctttca taggttcccc ctccgagtcg tcttcg 456

<210> 1879
<211> 491
<212> DNA
<213> Pinus radiata

<400> 1879
ccggagtgtc tagatggagt ttacgtccgc aatggcgcga atccccggtt caaaccccgcc 60
ggcgccacc attttattga cggcgatgga atgatacatg ccgtgacgct gagacacggg 120
aaggctagtt acagttgcgc gttcacggag accgaaaggc tegttagcga ggagcggggc 180
ggcgggagct tttaccgaa gcccatcggg caactccacg gccacggcgg gctgggtcgc 240
ctgctgctgc atgggtcccc ggggctctgc gggctggtca acaccgggaa gggcatgggc 300
gtggctaaag ccgggctggc cttctttaac ggccgtctgc tcgctatgtc cgaagacgat 360
ctcccgatg ccgtcagggt gacgggtgac ggcgatctgg tgacgacggg cagggtcgat 420
ttcgacgggc agcttcacgg gtcgtcatgc gtcaccgcgc accccagcat tgaccccgac 480
acggcgagc t

<210> 1880
<211> 310
<212> DNA
<213> Pinus radiata

<400> 1880
gtgagttcta ggcattgagt tgcagtatcg caaatggcct acttacaagc tttgaggaat 60
gctggcgcaa ccttagaca atttgacaga ttagaatcaa tggagcttca gaagacttca 120
ccttaccacg atcttcgcca ttatcgggtc acccttgccc cctcacttca tctctctccc 180
ccacctccac caacctctcc tccattgtct ctcaccttt ctcagatcga tggatctgca 240
acttttctct ccagcatccc agtcaatcga agcatctaca gatgtccgta tcagcaatgc 300
tcaccataat

<210> 1881
<211> 251

<212> DNA
<213> *Pinus radiata*

<400> 1881
ctggntcctc cgaatctcgt cccgtgaaca cgcgccggtc agaaaatggtg aaggaggagg 60
attgtaaggt gccccaagag gccggaatcg tgaaggaaat tcaagcctcg actatgccca 120
agccctgcaa cgtgtgcagg atcgcgagcg ctctcgctcta ttgcaggggc gacgctgctt 180
atctctgctc cggctgcgac gtcaaaagttc acggcgccaa caagctggcg tcgcgccacg 240
agagggtgtg g 251

<210> 1882
<211> 351
<212> DNA
<213> *Pinus radiata*

<400> 1882
cacgagggcc agagctgtgtg ctgttcccag aagaggatat catcagctgt ccagtttgtc 60
ctaagaact acagaagaag aatatagaag atgggttagat ccccttgccc cccaaaagaa 120
gcgcttaacc gtggggcttg gacaggcatg gaggatacga ttctcaccga gtacatttca 180
gttcaatggca gtgtgtgctg gaaagctatc tccaaaagag caggtgagtg tcaataaaaa 240
tttaatatgca attcttttta ttacgagaag gaagtagcaa tctcccagggt tatataatac 300
aattcatcag tcatatatac cagaaattta tagtcgagtc taaggaggag a 351

<210> 1883
<211> 450
<212> DNA
<213> *Pinus radiata*

<400> 1883
tcctctatca cagaatagaa actgatggct agtcagattc cagaatgaac cctctaaatt 60
aaatgtagcc cgcctagaac attagaagaa gcaaaagcaa acattcatga tcaataaatg 120
tagattaaaa ccaccggcat tgatgtgtag tagaagttag atatgggtcag gcatacttgt 180
tctgtgtgtg ttggctgtgt tcaagtctgt agagcttttc tcggccgaagaa aaacgcatga 240
gcccacctc tgcctgcgac agcactgaaa gctcgaaggc ttcttctcat agaccgcctc 300
ggcgcttcca gaaggtcacc tgctgtcgca cgctattctc gatcttcttg gttcttattt 360
taccgcgcc cattttccac aaaaacccaa aattctgagta tgggcaggcg ttgaacttaa 420
atttgtctca tgaacagaat taccgagctt 450

<210> 1884
<211> 386
<212> DNA
<213> *Pinus radiata*

<400> 1884
aaatgatcag aggcggttct ccagttattc acaacaaaga aaaggtcccg cgcttcgggc 60
ttctgcccac atatgtctct gacgagagtg agctgaaatg gatcgaggtc ccggattgct 120
tctgttttca tctctggaac gcctgggaag aaggagaaga cgaggtgtgc gtcatcggtc 180
ccctgatgac cccgcgggac gccattttca acgaatctga cagcgcgctg cggagtgttc 240
tgtcgaaat tcggctcaat ctcaaaaacc gctgtctccac cagacgcgca atcacgcga 300
tgaatctcga gagtactctt agagcgcgcg cgggcccatc gattttccac ccgggtgggg 360
taccaggtaa gtgtacccaa ttcgcc 386

<210> 1885
<211> 190
<212> DNA
<213> *Pinus radiata*

<400> 1885
aaatgatcag aggcggttct ccagttattc acaacaaaga aaaggtcccg cgcttcgggc 60
ttctgcccac atatgtctct gacgagagtg agctgaaatg gatcgaggtc ccggattgct 120
tctgttttca tctctggaac gcctgggaag aaggagaaga cgaggtgtgc gtcatcggtc 180

cctgtatgac 190

<210> 1886
<211> 412
<212> DNA
<213> *Pinus radiata*

<400> 1886
gggtccagacc gccttcnngg gcgttcgtgc cgcaagatat gcttctgacg agagtgaagct 60
gaaatggntc gaggtcccg atgtgntctg cnttcattctc tggaaacgct gggagaaggg 120
agaagacgag gttgtcgtca tcggctctcg tatgaccccg ccggacgcca tttcaacga 180
atctgacagc gcgtcgcgga gtgttcgtgc ggaatctcg ctaactctca aaacgggctt 240
gtccaccaga cgcgagatga cgccgatgaa tctcgagagt acttctagag cggccgcggg 300
cccatcgatt ttccaccggg gtgggtacc aggtgaagtgt acccaattcg cctatacgt 360
gagtcgtatt acaattcacc tggccgtcgt tttacaaccg nntgactgg ga 412

<210> 1887
<211> 329
<212> DNA
<213> *Pinus radiata*

<400> 1887
atcagaaggc gggttctccag ttattcaca caaagaaaag gtcccgcgtc tcgggcttct 60
gcccaaatat gcttctgacg agagtgaagc gaaatggatc gaggtcccg atgtcttctg 120
ctttcatctc tggaaacgct gggagaaggg agaagacgag gtgtcgtca tcggctcctg 180
tatgaccccg ccggacgcca ttttcaacga atctgacagc gcgtcgcgga gtgttctgtc 240
ggaaattcgg ctcaattctca aaacgggctt gtccaccaga cgcgagatca cgccgatgaa 300
tctcgagagt acttctagaa gcggccggc 329

<210> 1888
<211> 101
<212> DNA
<213> *Pinus radiata*

<400> 1888
aaatgatcag aggcggttct ccagttattc acaacaaga aaaggtcccg cgcttcgggc 60
ttctgcccaa atatgcttct gacgagatg agctgaaatg g 101

<210> 1889
<211> 326
<212> DNA
<213> *Pinus radiata*

<400> 1889
atgatcagag gcggttctcc agttattcac aacaagaaa aggtcccgcg cttegggctt 60
ctgcccgaat atgcttctna cgagagtga ctgaaatgga tcgaggtccc ggattgtctc 120
tgctttcatc tctggaacgc ctgggaagaa ggagaagacg aggttgtcgt catcggtctc 180
tgtatgaccc cgctggagcg catcttcaac gaatctgaca gcgcgctgcg gagtgtctg 240
tcggaattc ggctcaatct caaaacggcg ttgtccacca gacgcgagat cagccgatg 300
aatctcgaga gtacttctag agcggt 326

<210> 1890
<211> 246
<212> DNA
<213> *Pinus radiata*

<400> 1890
agctgaaatg gatcgagctc ccgattgctc tctgctttca tctctggaac gcttgggaag 60
aaggagaaga cgaggtgtgc gtcacggctt cctgtatgac ccgcgcgac gccattttca 120
acgaatctga cagcgcgctg ccgagtgctt tgcggaaat tcggtcctaat ctcaaaacgc 180
gctgtccac cagacgcgag atcacgcgca tgaatctcga gagtacttct agagcgcgcg 240

cgggggc 246

<210> 1891
<211> 238
<212> DNA
<213> Pinus radiata

<400> 1891
aaatgatcag aggcggttct ccagttatcc acaacaaaag aaaggtcccg cgcttcggggc 60
ttctgcccaa atatgcttct gacgagagtg agctgaaatg gatcgaggtc ccggtattgct 120
tctgtttca tctctggaac gccctgggaag aaggagaaga cgaggttgct gtcacggct 180
cctgtatgac cccgccggac gccattttca acgaatctga cagcgcgctg cggagtgt 238

<210> 1892
<211> 349
<212> DNA
<213> Pinus radiata

<400> 1892
tgtaccggaa aattccaaac aaataatcaa coactggactc atattgccgg agatggggctc 60
agtggacagc gggcgcggaag gcacgagagc aattttgtct gatgattgtg tgaaattcga 120
atgccgatat tgtgtgtaggg ttttcccgac gtctcaggct ctccggcgcc accagaacgc 180
ccataaacga gaaocggccc gggcaatgac gaggtttcag agatcgccct ctgacagttc 240
aaactattca ggaaaaacaga atagtattga tctgtttagc cgtgagagag ttcccggggtc 300
ttctctcctt tcaccacacg gtacgagggg tcatgtgtgt tgacagtgc 349

<210> 1893
<211> 417
<212> DNA
<213> Pinus radiata

<400> 1893
gaagaagaag aagaagaag ccccggtggt tcagggcgaa tgagccgtag cgcctcagaa 60
tgggccttcc agaagtttct cagttttgat ggttccaaga ttccgtcaga agatggagaa 120
ggcgaaacaga agcctctcgg tgttaaagat cctctgcttc acggtcatat ggacaaacgct 180
cctcgccgctc tcagtcctct ctttgccgaa gtcaaggatg aggttcttct tctactgac 240
cctcgagatt acgaggcctt cctcaagcgg aggccttaacc ttgcttcgct ggcagtcgct 300
ttcactcggg ttacaggaat tagctctcca ggccctggtc cctcaacagt ggatgcaaac 360
caatctcaga acacttttagg atcagaaga gtgcactggt ggtatcccaa tcttccg 417

<210> 1894
<211> 456
<212> DNA
<213> Pinus radiata

<400> 1894
ggaaggcaat gagagtgatc tcctcaaggg aatgaagaag gcaaggcggt agagaggatc 60
aacagcaaaag gaacgatta gtaaaatgcc tccctgtgct gctggaaaac ggagtctcat 120
ctacagagggc gtcacaaggc atagatggac aggaagatgc gaagctcatc tttgggacaa 180
aagtaacttgg aaccagaacc aaaaataaaa gggcaagcaa gtgtacctag gtgcctatga 240
tgaggagagag cgtcgagcca gagcttatga ccttgccgct ctgaaatatt ggggtcctgg 300
aaactctcatt aattttcctg ttagtactga tgctagagat atgaaagaga tgcagagcat 360
ttcaagggaa gatttctctg cttctctcag acggaaaaagt agtgggtttt caagggggaat 420
gtcaaaaatc cgtggactgc caagcaatca caaact 456

<210> 1895
<211> 456
<212> DNA
<213> Eucalyptus grandis

<400> 1895

ggaaggcaat	gagagtgtac	tcttcaagg	aatgaagaag	gcaaggcgtg	agagaggatc	60
aacagcaaat	gaacggatta	gtaaaaatgc	tccctgtgtc	gctggaaaac	ggagttctat	120
ctacagaggg	gtcacaaagg	atagatggac	aggacgatat	gaagctcatc	tttgggacaa	180
aaagtacttg	aaccagaacc	aaaaataaaa	gggcaagcaa	gtgtacctag	gtgacctatga	240
tgaggaggag	gctgcagcca	gagcttatga	ccttgccgct	ctgaaatatt	ggggctctgg	300
aaactctcatt	aattttcctg	ttagtgacta	tgttagagat	attgaagaga	tgcagagcat	360
ttcaaggagg	gattttcctg	cttctctcag	acggaaaagt	agtgggtttt	caagggggaat	420
gtcaaaatac	cgtggactgc	caagcaatca	caaaact			456

<210> 1896

<211> 388

<212> DNA

<213> *Eucalyptus grandis*

<400> 1896

gtaaatcaat	acctggctag	catcctaatt	tagcattcaa	tgttggcagt	attagatcca	60
accagcagca	gcttcagcaa	cagcatgatc	tgccccctct	cccccaagcca	gcaacaatgc	120
cttttgccct	tccagttaag	atagcaataa	attccagat	gcctgggtta	gggtcaagag	180
gggtaatcag	gatgacagat	gcattccatca	aaagtctcct	agctcaaggt	gggtgggctgc	240
agactggagt	tggcgtgatc	gggttagaga	ctaggggagt	tgctcttcac	acagtatctc	300
ctgctaaacca	tatatctccg	gatgtaatct	ctaggaaacac	gatggattcg	tcttctactct	360
caccagttcc	ttatccgttt	ggccggggg				388

<210> 1897

<211> 202

<212> DNA

<213> *Eucalyptus grandis*

<400> 1897

atgcgaaaca	tgctcaaaaa	cccccaaat	catgggaagg	tgaagtgagg	gctgattcgg	60
agggttaaat	gttggaaggat	tacgcttcag	aggactggat	tacaggtggt	gaccgcttcc	120
gggttagcgt	gggtgaaatt	cttgataagt	tgaataagta	tgcggagctc	tctgttcata	180
tgtagctgtc	ccttgaaaag	gc				202

<210> 1898

<211> 289

<212> DNA

<213> *Eucalyptus grandis*

<400> 1898

gttgaatggg	gattcaaaaa	atggtctcac	aaggcggcgg	cggcagcagc	ggtaaatgcca	60
gaggtggcgg	tggcaataat	ggaaaaatcca	ctgaagttca	gccattgact	cggcagaatt	120
caatatacag	tctcactctt	gatgagggtc	aaaaccaggt	agggtattta	gggaagccat	180
tgagcagcat	gaacctggac	gagcttttga	agaatgtctg	gacagctgag	gccggctcagt	240
caatgtttat	ggatgtttag	ggcagggctg	tggctaatca	aaatgctct		289

<210> 1899

<211> 477

<212> DNA

<213> *Eucalyptus grandis*

<400> 1899

cttgaatctg	ggcgtgcecca	gctcgatcgc	agcttcaagc	agctcaaaaa	gactgtatat	60
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gtgaagtacc	agctcaaaccc	cggtctcactc	actgaatcag	atgattcaaa	gagcctctgc	180
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gaaggtgaga	agatagagca	tgaaaaagag	ttgtcagtac	ttcagagcca	ggagggcaag	300
ggagaagatg	aaaccaaggt	agacaagacc	aaggcctcat	taataaagtt	gcaagcacta	360
atagctgtta	cgtcggaggc	tgtctctaca	acttcaaatg	caattatttg	cctcagagac	420
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<210> 1900
 <211> 1243
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1900
 cccccctctt cctcagtcag ccagtccttc tctctctctc tctcacatct ctatgtttcag 60
 cctttttctt ccaatttggcc aagcagcgcc cgcgcgcgca cccgaaggct tccggatcttg 120
 gtgctcgttg ctattccgtc cgtcgatagg aggttaggct acgctgaagg aagttgatga 180
 gcgcaatttc actgatggag tggaaatcgga aacctctctc gcagtgaggaa tgggagaatc 240
 ttatgatgtt cgggtcaaaa cgcgaactgaa cctctaagcc gctgcgagcg actgattggg 300
 gaatcgagcg ggaggagctg attgaccccg ggtctctatt tctgtatgag aatggtggcg 360
 gcagcagcag ttgtaccagc attgatccgg gttacacttc tgtgtccaag agctcgaaat 420
 cggctctctg caattctctg tctacgggag aattgaaaat ctcgaaatcc tctgtggagg 480
 cgcgatgaagg cttttctctg cagagtagca agaaagaatt ggcggtgaat gattttaccg 540
 gaatgtcaacc ggcactcgag ccttcgggtc gctctgggtg gccactgctc agtctaaagc 600
 tcggtaaaag gatattttt gaaaatacta ttgacaagga tcatgtgaag acccaagacc 660
 ttctctcggg catgaaatca cctgatactc cagcaaaagag aaacaaatcc aactgcagg 720
 gtacgtccgc cccacgctgc caagttgaag gctgtaacct tgacctctct tcagctaaaag 780
 attaccacgc caagcataga gtttgtgaga gtcactctaa atgccctaag gtcacgtca 840
 gtggtataga cggtcggttt ttgtcagcaat gcagcaggtt tcatgggcta tctgagtttg 900
 atgaaaagaa cggtagctgt cgcaagcgcc tatctgatca caatgcgaag cgtcgcaagc 960
 cccgcgcaga ttgacccag ttgaatccgg ctgaaactgt tgcactgttt tatggtggga 1020
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 gtttttaatt ggcagatata caggacacta agctcataga gaaaggtccg aagcttccaa 1140
 taggcggagg ttgtggtgag tgtatcacta tcccaagcaa tgggataccg gacacctcca 1200
 agtccactgg attgggcaaa agctataaag aacttctatc atc 1243

<210> 1901
 <211> 366
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1901
 aaaaagtata tatacctcgg cctatttgat agtgaagtag aggcagcaag ggcgtatgac 60
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 gatggagaga tgattgcaaa agccagcaat gaaaatagca tctatgggtg ccatggctct 180
 gatctcaatc tcgggatatt agcttcttcc aggggaaatgg tggaaacctt agagccctcg 240
 gacgacatgc gtccaggaag tagtttaagg gtaggaaact ctgctgcac cttgggtgat 300
 ccatctgttg aaggtttata gatgacatct ggacaacctc tccctgacgg gtgtttatcc 360
 taccgt 366

<210> 1902
 <211> 466
 <212> DNA
 <213> *Pinus radiata*

<400> 1902
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 gctcatcgcg ctgcgagagc ttacgacagg gcagctatca agtttcgagg agttgaagct 120
 gataaaatt ttactctcac cgactatcaa gaagatttag accagacgag caagctctct 180
 aaagaagagt ttgtgcatat tctccgtcgt caaagtagtg gtttctctcg tggaaagttc 240
 aagtagtagg cgtttaccct gcacaagtgt gggcgatggg aagccagaat gggccaattc 300
 ctaggaaaaa agtatatata ttggggatta ttgacagtg aagaggagcg tgcaaggcca 360
 tatgataagg ctgctatcag gtgcaatgga aaggaggcag taacgaactt tgactctagc 420
 ttatatgaaa aagaaaattct tgaagaagaa agagagagtc agactt 466

<210> 1903
 <211> 240
 <212> DNA
 <213> *Pinus radiata*

<400> 1903
 gcttatttga atgcttgaca ctaactatgg aagcgaaacag acaaatgctt gcaaaaaaca 60
 gaaaagaata cgttccaaagg attcaggaga agatgggtgaa gatagacaga gagaacatcc 120
 tttcatgtgt actgagcccg gtgaacttgc aagagggaaa aagaatgggt tagactatct 180
 ctttgatctt tatgaacagt gcgggaaatt tctgctggat gtgcaacata ttgcgaagga 240

<210> 1904
 <211> 495
 <212> DNA
 <213> Pinus radiata

<400> 1904
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 ataaggtttg tgaattgcac tcgaaggctt ctactgttat tgtgggtggg ttcattcagc 180
 ggttctgccca acaattgtagc agatttcatc caagatctga attcgacgag ggaacacgaa 240
 gctgcagaaa gcgccttgct gaccacaaca gacgaaggag aaaaacctcag ccaagtacat 300
 gtgttacatc acaattctcag gctgggacaa caggtttaga aaatgataac cagacaacta 360
 aaggatcatc aggtcacatt acaacggctg ttcagaatac accgaacatt agcagaagca 420
 ctagttagtac tagtccgtcc ttgattacat cagtaccgat gatgatgttc ccaataact 480
 ataaaggaca tagtc 495

<210> 1905
 <211> 377
 <212> DNA
 <213> Eucalyptus grandis

<400> 1905
 taacactaca ttcatacccc caaacagcaa acggatcatc tcgcacaaac catcaagtgt 60
 agatgcacgc gcggaattctg cagcactggc aaagaggatg aggaggctc acattcagaa 120
 tatagcgga gattgcaact tgaagaacag attacatata caaagtggaa tcacatatac 180
 tcagcaacaa agagctccct tttccacatt ggccgagaac ttccgcacta gcaattcgcc 240
 ccccccagaa tctgaagcaa accaaaaaga agccaccgat gatgctcatg gcaccaactg 300
 ccaaggaaca tttcttaaaa aggatgatcc aaaagtctac gctctgattc aacaagccga 360
 gctgcctcagt tcccttg 377

<210> 1906
 <211> 377
 <212> DNA
 <213> Eucalyptus grandis

<400> 1906
 gtgatttttag tgctcgatcc tttgaaaaag gcatcaatcc agtcaaacga gataaaaaa 60
 cataaacatgc aaaaactcaat acatgattct cagaaaagac catcatcttt aattcagtca 120
 aacgagggctg tttttacgca aacttcggtc ataagctgtg ccttgcaatc gtttgtaaaa 180
 cctccaaatg ctaaggtcac ggtcacattc ctctctgac tcattggcacc tcattggcacc 240
 aacgtccaag gaacatttct taataaaggat gatccaaaag ttaactgctct gattcaacaa 300
 gccgagctgc tcagttccct tgcggtgaaa gtcaatgcag ataactgga ccagagtctt 360
 gaaaatgctt ggaagg 377

<210> 1907
 <211> 1668
 <212> DNA
 <213> Pinus radiata

<400> 1907
 agctgtaagc tacctacgaa gtggaatcga agagagagag agtgagaggg taactaataa 60
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 cggcgccgtg aaagtggcga tcccgccgtg gtcgggggat tcggggacga ttgggttaaa 180
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gtcttcgctt	ccggctgcc	agaagcagca	gtctgcgttg	caggggaacgc	atatgggtgcc	300
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ccacaaggctc	tgcgagctcc	actccaaggt	tcccaaggctc	atcgctcaacg	ggatcgagca	420
gcgcttcctgt	cagcaatgta	gcagggtttca	tacgttgtct	gagtttgatg	aagggaagcg	480
gagctgtcgg	aggcgctca	ctggccacaa	ccagcgcggt	aggaaacccc	aacttaattc	540
aatcgcgatg	aaagctgcaa	gatttgccttc	cactttctat	gatgacgggc	gacttagcag	600
catctcgatg	gctagatcac	ctttcatgca	tccacggata	gcttcaaaact	tggaggagaa	660
ttcgctcgat	ttcaaacctg	gaggatattg	aaaaggagct	tggccgagga	ttaaaggctga	720
ggatgtatca	tcataatgat	ggcaattatc	aaccaaatatc	cctctccgtg	cataatgctg	780
aaagatttgt	tttctcttta	cagggttcta	agactgtacc	tgggtgagct	atataatcaa	840
gcactcatca	gtacaggcaa	agctccaggg	atcatgtggg	ccaatccttg	accttgtcat	900
cctgctcggg	agaaaaatca	acaggttttaa	atgtttatatc	tgcaccacat	ggtttatcag	960
gagcttcgga	ctctggctctg	gcgcactagc	ttctgtcaat	ccaatccggg	ggcccaaggct	1020
cctcaggatc	agcttcattt	gatatgacca	cgcggtcagg	tctcacatg	gatcaactta	1080
tactagagga	tcaacctctt	atggctcaag	caccattgat	gcaaggagta	caacacaaact	1140
ttggctcatt	tgacagaagc	aagttaactaa	caatgtatcc	ccagctcctc	actaatcttg	1200
caacaggtgg	gttccctgca	gctactgtga	attctatgga	taagcagcac	caaggtctatc	1260
cactcgcttc	cgatcgaggc	caaatggtaa	actttggagg	aaatatattt	ggcttgctgc	1320
aggggagcag	tttcagaggc	tctcaagctg	caagttcaca	agatatctaa	ggcaccatag	1380
atctgatgtg	caagctctcg	gaaacacaaa	ctaagtatc	tcatgatcaa	cttgccatgg	1440
tgacacaggg	aagtaaacag	tttactgact	tgcaagttgt	gaggtctttt	gaatcatcta	1500
tttatgacac	tcatacaact	ctgtagctct	aatctgggtg	ttcttcgggc	atgttttctt	1560
tgccttcaga	cttgaagata	actgttaaaa	cttcattatg	acaattatct	gtacctctta	1620
aatgcagaca	attgctttca	attacccttg	cttatttcaa	aaaaaaaa		1668

<210> 1908

<211> 821

<212> DNA

<213> *Eucalyptus grandis*

<400> 1908

ctctctctct	ctctctctct	ctctttcttt	ctttctttct	ctctctagca	gaggcacaga	60
ggcgccgaga	gggcaactgat	gatgacgact	ggggtagctc	caatgaatgg	gctctagaga	120
ctctcgctca	tggacgtggg	ttcgggctcg	tggacgacgg	agtcggggctc	ctcttctctc	180
ccccctctcg	agtcctctcaa	cgccctcaag	ttcgcccgaga	aaatctaact	ccagaataat	240
aacagtagta	ataatgcggc	cgcacccaa	aacggctccg	gctccggctc	cggtctctcc	300
tcgcgcgcgc	cgcccgccgc	cggtcgccgc	acgccccgga	agaaggtgag	ggctctccgc	360
ggcgccggcg	gctcgggggc	gatccagggc	gggcagcccc	cgaggtgcca	ggtgggaaggc	420
tgccgggtgg	atctgagcga	tgccaaggct	tactattcca	ggcacaagggt	gtcgccgatg	480
cactccaagt	ccggcaccgt	catcgtcgcc	ggcatcgagc	agaggttctg	ccagcagatgc	540
agcagattcc	atcagcttac	tgaatttgac	caagggaaac	gaaggtgtcg	tagacgtttg	600
gctggttcaa	atgagcgccg	gaggaaagcc	ccacctgggt	cgctactatc	ctctcgctat	660
ggcgagctgc	aatctctcat	atttgagaac	accaccagag	tgggtagtgt	tctgatggat	720
ttacagcat	accggaagca	tgcatgggtc	gcgcacggtt	ttcttgagcg	cacgacacct	780
ggagactctag	ttcccggacc	aggaaaggct	tatctctatc	c		821

<210> 1909

<211> 105

<212> DNA

<213> *Eucalyptus grandis*

<400> 1909

gggaagagga	gcgtagagtg	ggattcgaa	gattggaa	gggacggtga	tctgttcgtc	60
gctagggccg	tgaacccggt	cccgctcgat	ttccccggcc	ggcag		105

<210> 1910

<211> 338

<212> DNA

<213> *Pinus radiata*

<400> 1910

cagaagagac	ctgccatgga	aacacatctt	gcaggacaga	aatttcacga	ttcacaggct	60
cacagatgcc	ccagtgccag	tccgaggggt	gtaaagcaaa	cttgagcagt	gccaaacact	120
accatcgccg	acataaagt	tgcgaattcc	actctaaggc	tctacgggtc	gttggtggcg	180
gtcagattca	gcgggtttgc	caacagtgtg	gtagatttca	tcagacatct	gaatttgacg	240
gaggaaagcg	gagctgcaga	aagcgcttg	ctgaccacaa	cagacgcccg	cggaaacctt	300
aaccgagtca	atgtactaca	tcccaatgtc	aggcaggg			338

<210> 1911
 <211> 465
 <212> DNA
 <213> Pinus radiata

<400> 1911						
tcgacatggg	cttttgcat	ttcttgaaga	agctgtgatt	gttcgaccca	caggttactc	60
attcacattg	cctctccatc	tccttcaatc	aggattccag	aattgcccgt	cgaatggat	120
gaagtccaag	tcaaggtcga	cattcagagc	acaaatgtca	gtgccgacga	gccaggcctc	180
gcgaagcgcc	aggggttcga	gctcgccaag	agccctgaaa	acgtggcttc	gaatccact	240
gcgctctcct	ctccgaaaaa	accctaaagt	gcttcttctc	cttctctctc	gtcgccgaga	300
gcgcagcctc	ccgcttgcca	ggtggagaaa	tgccgcccgg	atcttgctga	tgccaaagag	360
tactatagga	ggcagagggt	ttgcgagcaa	cattcaaaag	ctcgaattgt	gctcgttctt	420
ggcctccagc	aacgctctg	ccagcaatgt	agcagattcc	atgtg		465

<210> 1912
 <211> 509
 <212> DNA
 <213> Pinus radiata

<400> 1912						
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ggattacacc	cacgcacccc	atgtcttcca	cctcatcgta	ttcttctccc	tcacctgaca	120
caccattcaca	gtctgcccgt	gtgcgcccga	catctaccgc	agacgattct	tcgctcatgg	180
aacctccacg	taagcgagcc	agggctgatc	ttaacgctga	acagcggaaga	gaggccaggg	240
cccacccgtaa	tcgaattgcc	gctcaaaact	ctcgcgataa	acgcaaggcg	caattcaact	300
acatggagca	gcgcgtggca	caactggagg	aagagaacca	cgactactga	gcaggcatgg	360
gcctctctca	attcacgcca	gccgacaacg	acaagttcgt	cagcctcgag	agagaatcag	420
tacaggcccg	cgagaacaga	gagctcaagg	agaggatcaa	gagcttagag	agcgggtggt	480
cgccgctcat	caaagcgttg	caggcctca				509

<210> 1913
 <211> 151
 <212> PRT
 <213> Pinus radiata

<400> 1913				
Glu Gly Asn	Glu Ser Asp Leu Leu Lys Gly Met Lys Lys Ala Arg Arg			
1	5	10	15	
Glu Arg Gly	Ser Thr Ala Lys Glu Arg Ile Ser Lys Met Pro Pro Cys			
	20	25	30	
Ala Ala Gly	Lys Arg Ser Ser Ile Tyr Arg Gly Val Thr Arg His Arg			
	35	40	45	
Trp Thr Gly	Arg Tyr Glu Ala His Leu Trp Asp Lys Ser Thr Trp Asn			
	50	55	60	
Gln Asn Gln	Asn Lys Lys Gly Lys Gln Val Tyr Leu Gly Ala Tyr Asp			
	65	70	75	80
Glu Glu Glu	Ala Ala Ala Arg Ala Tyr Asp Leu Ala Ala Leu Lys Tyr			
	85	90	95	
Trp Gly Pro	Gly Thr Leu Ile Asn Phe Pro Val Ser Asp Tyr Ala Arg			
	100	105	110	
Asp Ile Glu	Glu Met Gln Ser Ile Ser Arg Glu Asp Phe Leu Ala Ser			
	115	120	125	
Leu Arg Arg	Lys Ser Ser Gly Phe Ser Arg Gly Met Ser Lys Tyr Arg			

130 135 140
 Gly Leu Pro Ser Asn His Lys
 145 150
 <210> 1914
 <211> 128
 <212> PRT
 <213> Eucalyptus grandis
 <400> 1914
 Lys Ser Ile Pro Gly Gln His Pro Asn Leu Ala Phe Asn Val Gly Ser
 1 5 10 15
 Ile Arg Ser Asn Gln Gln Gln Leu Gln Gln His Asp Leu Pro Leu
 20 25 30
 Leu Pro Lys Pro Ala Thr Met Pro Phe Ala Ser Ser Val Ser Ile Ala
 35 40 45
 Asn Asn Ser Gln Met Pro Gly Leu Gly Ser Arg Gly Val Ile Arg Met
 50 55 60
 Thr Asp Ala Ser Ile Lys Ser Ser Leu Ala Gln Gly Gly Gly Leu Gln
 65 70 75 80
 Thr Gly Val Gly Met Thr Gly Leu Asp Thr Arg Gly Val Ala Leu Gln
 85 90 95
 Thr Val Ser Pro Ala Asn His Ile Ser Pro Asp Val Ile Ser Arg Asn
 100 105 110
 Thr Met Asp Ser Ser Ser Leu Ser Pro Val Pro Tyr Pro Phe Gly Arg
 115 120 125
 <210> 1915
 <211> 66
 <212> PRT
 <213> Eucalyptus grandis
 <400> 1915
 Ala Lys His Ala Gln Thr Pro Pro Thr Ser Trp Glu Gly Gly Ser Gly
 1 5 10 15
 Ala Asp Ser Glu Val Asn Met Leu Lys Asp Tyr Ala Ser Glu Asp Trp
 20 25 30
 Ile Thr Gly Val Asp Arg Phe Arg Leu Ser Leu Val Glu Phe Leu Asp
 35 40 45
 Lys Leu Asn Lys Tyr Ala Glu Ser Ser Val His Met Tyr Val Ser Leu
 50 55 60
 Glu Lys
 65
 <210> 1916
 <211> 89
 <212> PRT
 <213> Eucalyptus grandis
 <400> 1916
 Met Ala Ser Gln Gly Gly Gly Gly Ser Ser Gly Asn Ala Arg Gly Gly
 1 5 10 15
 Gly Gly Asn Asn Gly Lys Ser Thr Glu Val Gln Pro Leu Thr Arg Gln
 20 25 30
 Asn Ser Ile Tyr Ser Leu Thr Leu Asp Glu Val Gln Asn Gln Leu Gly
 35 40 45
 Asp Leu Gly Lys Pro Leu Ser Ser Met Asn Leu Asp Glu Leu Leu Lys
 50 55 60
 Asn Val Trp Thr Ala Glu Ala Gly Gln Ser Met Phe Met Asp Val Glu
 65 70 75 80
 Gly Thr Ala Val Ala Asn Gln Asn Ala

85

<210> 1917
 <211> 159
 <212> PRT
 <213> Eucalyptus grandis

<400> 1917
 Leu Glu Ile Gly Arg Ala Gln Leu Asp Arg Ser Phe Lys Gln Leu Lys
 1 5 10 15
 Lys Thr Val Tyr His Ser Thr Ser Val Leu Ser Ser Ser
 20 25 30
 Trp Ser Ser Lys Pro Pro Leu Ala Val Lys Tyr Gln Leu Asn Pro Gly
 35 40 45
 Ser Leu Thr Glu Ser Asp Asp Ser Lys Ser Leu Cys Ser Thr Leu Asp
 50 55 60
 Lys Leu Leu Ala Trp Glu Lys Lys Leu Tyr Glu Glu Val Lys Ala Arg
 65 70 75 80
 Glu Gly Glu Lys Ile Glu His Glu Lys Lys Leu Ser Val Leu Gln Ser
 85 90 95
 Gln Glu Gly Lys Gly Glu Asp Glu Thr Lys Val Asp Lys Thr Lys Ala
 100 105 110
 Ser Leu Asn Lys Leu Gln Ala Leu Ile Ala Val Thr Ser Glu Ala Val
 115 120 125
 Ser Thr Thr Ser Asn Ala Ile Ile Gly Leu Arg Asp Ser Arg Leu Val
 130 135 140
 Pro Gln Leu Val Glu Leu Cys His Gly Phe Met Tyr Met Trp Arg
 145 150 155

<210> 1918
 <211> 349
 <212> PRT
 <213> Eucalyptus grandis

<400> 1918
 Met Glu Trp Asn Ala Lys Pro Pro Leu Gln Trp Glu Trp Glu Asn Leu
 1 5 10 15
 Met Met Phe Gly Ser Lys Ala Thr Glu Thr Ser Lys Pro Leu Arg Ala
 20 25 30
 Thr Asp Trp Gly Ile Glu Ala Glu Glu Leu Ile Asp Pro Gly Ser Leu
 35 40 45
 Phe Leu Tyr Glu Asn Gly Gly Gly Ser Ser Ser Cys Thr Ser Ile Asp
 50 55 60
 Pro Gly Tyr Thr Ser Val Ser Lys Ser Ser Lys Ser Ala Ser Val Asn
 65 70 75 80
 Ser Ser Ser Thr Asp Glu Leu Lys Ile Ser Lys Phe Ser Val Glu Ala
 85 90 95
 His Glu Gly Phe Ser Leu Gln Ser Ser Lys Lys Glu Leu Ala Val Asn
 100 105 110
 Asp Phe Thr Gly Met Ser Pro Ala Leu Glu Pro Ser Val Cys Ser Gly
 115 120 125
 Glu Pro Leu Leu Ser Leu Lys Leu Gly Lys Arg Ile Tyr Phe Glu Asn
 130 135 140
 Thr Ile Asp Lys Asp His Val Lys Thr Gln Asp Leu Pro Ser Val Met
 145 150 155 160
 Lys Ser Pro Asp Thr Pro Ala Lys Arg Asn Lys Ser Asn Cys Gln Gly
 165 170 175
 Thr Ser Ala Pro Arg Cys Gln Val Glu Gly Cys Asn Leu Asp Leu Ser
 180 185 190
 Ser Ala Lys Asp Tyr His Arg Lys His Arg Val Cys Glu Ser His Ser
 195 200 205

Lys Cys Pro Lys Val Ile Val Ser Gly Ile Glu Arg Arg Phe Cys Gln
 210 215 220
 Gln Cys Ser Arg Phe His Gly Leu Ser Glu Phe Asp Glu Lys Lys Arg
 225 230 235 240
 Ser Cys Arg Lys Arg Leu Ser Asp His Asn Ala Arg Arg Arg Lys Pro
 245 250 255
 Pro Pro Asp Val Thr Gln Leu Asn Pro Ala Arg Leu Ser Ala Leu Phe
 260 265 270
 Tyr Gly Gly Met Gln Gln Leu Asn Pro Val Leu Ser Arg Ala Pro Ala
 275 280 285
 Ile His Thr Arg Ser Thr Ala Ser Phe Lys Trp Ala Asp Thr Gln Asp
 290 295 300
 Thr Lys Leu Ile Glu Lys Gly Pro Lys Leu Pro Ile Gly Gly Val
 305 310 315 320
 Gly Glu Cys Ile Thr Ile Pro Ser Asn Gly Ile Pro Asp Thr Leu Lys
 325 330 335
 Ser Thr Gly Leu Gly Lys Ser Tyr Asn Glu Leu Leu Ser
 340 345

<210> 1919

<211> 122

<212> PRT

<213> *Eucalyptus grandis*

<400> 1919

Lys Lys Tyr Ile Tyr Leu Gly Leu Phe Asp Ser Glu Val Glu Ala Ala
 1 5 10 15
 Arg Ala Tyr Asp Lys Ala Ala Ile Lys Cys Asn Gly Arg Glu Ala Val
 20 25 30
 Thr Asn Phe Glu Pro Ser Thr Tyr Asp Gly Glu Met Ile Ala Lys Ala
 35 40 45
 Ser Asn Glu Asn Ser Ile Tyr Gly Asp His Gly Leu Asp Leu Asn Leu
 50 55 60
 Gly Ile Ser Ala Ser Ser Arg Gly Met Val Glu Thr Leu Glu Pro Ser
 65 70 75 80
 Asp Asp Met Arg Gln Gly Ser Ser Leu Arg Val Gly Asn Ser Ala Ala
 85 90 95
 Ser Trp Gly Asp Pro Ser Val Glu Gly Leu Ser Met Thr Ser Gly Gln
 100 105 110
 Pro Leu Leu Asp Gly Cys Leu Ser Tyr Arg
 115 120

<210> 1920

<211> 155

<212> PRT

<213> *Pinus radiata*

<400> 1920

Leu Ile His Gly Gly Gly Asp Asp Tyr Val Gly Leu Cys Glu Gly
 1 5 10 15
 Gly Phe Asp Thr Ala His Ala Ala Ala Arg Ala Tyr Asp Arg Ala Ala
 20 25 30
 Ile Lys Phe Arg Gly Val Glu Ala Asp Ile Asn Phe Thr Leu Thr Asp
 35 40 45
 Tyr Gln Glu Asp Leu Asp Gln Thr Ser Lys Leu Ser Lys Glu Glu Phe
 50 55 60
 Val His Ile Leu Arg Arg Gln Ser Thr Gly Phe Ser Arg Gly Ser Ser
 65 70 75 80
 Lys Tyr Arg Gly Val Thr Leu His Lys Cys Gly Arg Trp Glu Ala Arg
 85 90 95
 Met Gly Gln Phe Leu Gly Lys Lys Tyr Ile Tyr Leu Gly Leu Phe Asp

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          100          105          110
Ser Glu Glu Glu Ala Ala Arg Ala Tyr Asp Lys Ala Ala Ile Arg Cys
      115          120          125
Asn Gly Lys Glu Ala Val Thr Asn Phe Asp Pro Ser Leu Tyr Glu Lys
      130          135          140
Glu Ile Leu Glu Glu Arg Arg Glu Ser Gln Thr
      145          150          155

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<210> 1921
 <211> 79
 <212> PRT
 <213> Pinus radiata

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          <400> 1921
Leu Ile Gly Met Pro Asp Thr Asn Tyr Gly Ser Glu Gln Thr Asn Ala
      1          5          10          15
Cys Lys Lys Gln Lys Arg Ile Arg Ser Lys Asp Ser Gly Glu Asp Gly
      20          25          30
Glu Asp Arg Gln Arg Glu His Pro Phe Ile Val Thr Glu Pro Gly Glu
      35          40          45
Leu Ala Arg Gly Lys Lys Asn Gly Leu Asp Tyr Leu Phe Asp Leu Tyr
      50          55          60
Glu Gln Cys Gly Lys Phe Leu Leu Asp Val Gln His Ile Ala Lys
      65          70          75

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<210> 1922
 <211> 164
 <212> PRT
 <213> Pinus radiata

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          <400> 1922
His Gly Asn Arg Phe Cys Arg Thr Gly Ile Ser Ser Cys Ala Gly Ser
      1          5          10          15
Gln Ile Pro His Cys Gln Ala Glu Gly Cys Lys Ala Asn Leu Ser Ser
      20          25          30
Ala Lys His Tyr His Arg Arg His Lys Val Cys Glu Leu His Ser Lys
      35          40          45
Ala Ser Thr Val Ile Val Gly Gly Phe Ile Gln Arg Phe Cys Gln Gln
      50          55          60
Cys Ser Arg Phe His Pro Arg Ser Glu Phe Asp Glu Gly Lys Arg Ser
      65          70          75          80
Cys Arg Lys Arg Leu Ala Asp His Asn Arg Arg Arg Arg Lys Pro Gln
      85          90          95
Pro Ser Thr Cys Val Thr Ser Gln Ser Gln Ala Gly Thr Thr Gly Leu
      100          105          110
Glu Asn Asp Asn Gln Thr Thr Lys Gly Ser Ser Gly His Ile Thr Thr
      115          120          125
Ala Val Gln Asn Thr Pro Asn Ile Ser Arg Ser Thr Ser Ser Thr Ser
      130          135          140
Pro Ser Leu Ile Thr Ser Val Pro Met Met Met Phe Pro Asn Asn Tyr
      145          150          155          160
Lys Gly His Ser

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<210> 1923
 <211> 125
 <212> PRT
 <213> Eucalyptus grandis

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          <400> 1923
Asn Thr Thr Phe Ile Thr Pro Asn Ser Lys Arg Ile Ile Ser His Asn

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1	5	10	15
Pro Ser Ser Val Asp Arg Pro Ala Glu Ser Ala Ala Leu Ala Lys Arg			
20		25	30
Met Arg Arg Ala His Ile Gln Asn Ile Ala Gly Asp Cys Asn Leu Lys			
35	40	45	
Asp Arg Leu His Ile Gln Ser Gly Ile Thr Tyr Ser Gln Gln Gln Arg			
50	55	60	
Ala Pro Phe Ser Thr Leu Ala Gln Asn Phe Arg Thr Ser Asn Ser Pro			
65	70	75	80
Pro Gln Gln Ser Glu Ser Asn Gln Lys Glu Ala Thr Asp Asp Ala His			
85	90	95	
Gly Thr Asn Val Gln Gly Thr Phe Leu Lys Lys Asp Asp Pro Lys Val			
100	105	110	
Thr Ala Leu Ile Gln Gln Ala Glu Leu Leu Ser Ser Leu			
115	120	125	

<210> 1924

<211> 50

<212> PRT

<213> Eucalyptus grandis

<400> 1924

Ala Ala His Gly Thr Asn Val Gln Gly Thr Phe Leu Lys Lys Asp Asp			
1	5	10	15
Pro Lys Val Thr Ala Leu Ile Gln Gln Ala Glu Leu Leu Ser Ser Leu			
20	25	30	
Ala Val Lys Val Asn Ala Asp Asn Met Asp Gln Ser Leu Glu Asn Ala			
35	40	45	
Trp Lys			
50			

<210> 1925

<211> 257

<212> PRT

<213> Pinus radiata

<400> 1925

Ala Val Ser Tyr Leu Arg Ser Gly Ile Glu Glu Arg Glu Ser Glu Arg			
1	5	10	15
Leu Thr Asn Lys Met Asn Met Lys Ile Arg Thr Ser Asp Thr Ser Thr			
20	25	30	
Pro Asp Asp Gln Gln Gln His Ser Gly Ala Val Lys Val Ala Ile Pro			
35	40	45	
Ala Val Ser Gly Asp Ser Gly Thr Ile Gly Leu Lys Leu Gly Lys Arg			
50	55	60	
Thr Tyr Phe Glu Ala Val Lys Ala Ile Pro Thr Ala Ile Pro Ser Pro			
65	70	75	80
Ser Cys Val Pro Ala Ala Lys Lys Gln Gln Ser Ala Leu Gln Gly Thr			
85	90	95	
His Met Val Pro Arg Cys Gln Val Glu Gly Cys Glu Met Glu Leu Thr			
100	105	110	
Ala Ala Lys Asp Tyr His Arg Arg His Lys Val Cys Glu Leu His Ser			
115	120	125	
Lys Phe Pro Lys Val Ile Val Asn Gly Ile Glu Gln Arg Phe Cys Gln			
130	135	140	
Gln Cys Ser Arg Phe His Thr Leu Ser Glu Phe Asp Glu Gly Lys Arg			
145	150	155	160
Ser Cys Arg Arg Arg Leu Ala Gly His Asn Gln Arg Arg Arg Lys Pro			
165	170	175	
Gln Leu Asn Ser Thr Ala Met Lys Ala Ala Arg Phe Ala Ser Thr Phe			
180	185	190	

Tyr Asp Asp Gly Arg Leu Ser Ser Ile Leu Met Ala Arg Ser Pro Phe
 195 200 205
 Met His Pro Arg Ile Ala Ser Asn Leu Glu Glu Asn Ser Leu Asp Phe
 210 215 220
 Lys Leu Gly Gly Tyr Gly Lys Gly Ala Trp Pro Arg Ile Lys Ala Glu
 225 230 235 240
 Asp Val Ser Ser Tyr Asp Gly Gln Leu Ser Thr Lys Tyr Pro Leu Pro
 245 250 255
 Ser

<210> 1926
 <211> 230
 <212> PRT
 <213> Eucalyptus grandis

<400> 1926
 Met Asp Val Gly Ser Gly Ser Trp Thr Thr Glu Ser Gly Ser Ser Ser
 1 5 10 15
 Pro Pro Pro Leu Glu Ser Leu Asn Gly Leu Lys Phe Gly Gln Lys Ile
 20 25 30
 Tyr Phe Gln Asn Asn Ser Ser Asn Asn Ala Ala Ala Pro Lys Asn
 35 40 45
 Gly Ser Gly Ser Gly Ser Gly Ser Ser Ala Ala Ala Pro Ala Pro
 50 55 60
 Gly Ser Gly Thr Pro Pro Lys Lys Val Arg Ala Ser Ala Gly Gly Gly
 65 70 75 80
 Gly Cys Gly Ala Ile Gln Gly Gly Gln Pro Pro Arg Cys Gln Val Glu
 85 90 95
 Gly Cys Arg Val Asp Leu Ser Asp Ala Lys Ala Tyr Tyr Ser Arg His
 100 105 110
 Lys Val Cys Gly Met His Ser Lys Ser Ala Thr Val Ile Val Ala Gly
 115 120 125
 Ile Glu Gln Arg Phe Cys Gln Gln Cys Ser Arg Phe His Gln Leu Thr
 130 135 140
 Glu Phe Asp Gln Gly Lys Arg Ser Cys Arg Arg Arg Leu Ala Gly His
 145 150 155 160
 Asn Glu Arg Arg Arg Lys Pro Pro Pro Gly Ser Leu Leu Ser Ser Arg
 165 170 175
 Tyr Gly Arg Leu Gln Ser Ser Ile Phe Glu Asn Thr Thr Arg Val Gly
 180 185 190
 Ser Phe Leu Met Asp Phe Thr Ala Tyr Pro Lys His Ala Trp Ser Ala
 195 200 205
 Pro Arg Phe Ser Glu Arg Thr Thr Pro Gly Asp Leu Val Pro Gly Pro
 210 215 220
 Gly Lys Val Tyr Pro His
 225 230

<210> 1927
 <211> 35
 <212> PRT
 <213> Eucalyptus grandis

<400> 1927
 Gly Lys Arg Ser Val Glu Trp Asp Ser Asn Asp Trp Lys Trp Asp Gly
 1 5 10 15
 Asp Leu Phe Val Ala Arg Pro Leu Asn Pro Val Pro Ser Asp Phe Pro
 20 25 30
 Gly Arg Gln
 35

<210> 1928
 <211> 112
 <212> PRT
 <213> Pinus radiata

<400> 1928
 Glu Glu Thr Cys His Gly Asn Thr Phe Cys Arg Thr Glu Ile Ser Ser
 1 5 10 15
 Phe Thr Gly Ser Gln Ile Pro Gln Cys Gln Ser Glu Gly Cys Lys Ala
 20 25 30
 Asn Leu Ser Ser Ala Lys His Tyr His Arg Arg His Lys Val Cys Glu
 35 40 45
 Phe His Ser Lys Ala Pro Thr Val Val Val Gly Gly Gln Ile Gln Arg
 50 55 60
 Phe Cys Gln Gln Cys Ser Arg Phe His Gln Thr Ser Glu Phe Asp Gly
 65 70 75 80
 Gly Lys Arg Ser Cys Arg Lys Arg Leu Ala Asp His Asn Arg Arg Arg
 85 90 95
 Arg Lys Pro Lys Pro Ser Gln Cys Thr Thr Ser Gln Cys Gln Ala Gly
 100 105 110

<210> 1929
 <211> 117
 <212> PRT
 <213> Pinus radiata

<400> 1929
 Met Asp Glu Val Gln Val Lys Val Asp Ile Gln Ser Thr Asn Val Ser
 1 5 10 15
 Ala Asp Glu Pro Arg Pro Ala Lys Arg Gln Gly Phe Glu Leu Ala Lys
 20 25 30
 Ser Pro Glu Asn Val Ala Ser Lys Ser Thr Ala Leu Ser Ser Pro Lys
 35 40 45
 Lys Pro Lys Ala Ala Ser Ser Ser Ser Ser Ser Ser Pro Arg Ala Gln
 50 55 60
 Pro Pro Ala Cys Gln Val Glu Lys Cys Ala Ala Asp Leu Ala Asp Ala
 65 70 75 80
 Lys Glu Tyr Tyr Arg Arg His Arg Val Cys Glu Gln His Ser Lys Ala
 85 90 95
 Arg Ile Val Leu Val Leu Gly Leu Gln Gln Arg Phe Cys Gln Gln Cys
 100 105 110
 Ser Arg Phe His Val
 115

<210> 1930
 <211> 143
 <212> PRT
 <213> Pinus radiata

<400> 1930
 Met Ser Ser Thr Ser Ser Tyr Ser Ser Pro Ser Pro Asp Thr Pro Ser
 1 5 10 15
 Gln Ser Ala Ala Val Arg Pro Thr Ser Thr Arg Asp Asp Ser Ser Val
 20 25 30
 Met Glu Pro Pro Arg Lys Arg Ala Arg Ala Asp Leu Asn Ala Glu Gln
 35 40 45
 Arg Arg Glu Ala Arg Ala His Arg Asn Arg Ile Ala Ala Gln Asn Ser
 50 55 60
 Arg Asp Lys Arg Lys Ala Gln Phe Thr Tyr Met Glu Gln Arg Val Ala
 65 70 75 80
 Gln Leu Glu Glu Glu Asn Gln Arg Leu Arg Ala Gly Met Gly Leu Ser

			85					90				95	
Gln	Phe	Thr	Pro	Ala	Asp	Asn	Asp	Lys	Phe	Val	Ser	Leu	Glu
			100					105				110	
Ser	Val	Gln	Ala	Arg	Glu	Asn	Arg	Glu	Leu	Lys	Glu	Arg	Ile
			115					120				125	
Leu	Glu	Ser	Gly	Trp	Ser	Ala	Val	Ile	Lys	Ala	Leu	Gln	Ala
			130				135					140	

<210> 1931
 <211> 199
 <212> DNA
 <213> Pinus radiata

<400> 1931	
aacaactgaa caataaaaaat cacaagcact gaatctaacc atctctccac aaagcagaat	60
catttttttag cagtgacagaa ttaaatcaaa acacaattgt tcggctgttaa agcaaaagatg	120
aagcatcacg tagtgacacaa ttgctgtagc aagaaagctg taaagagagg cttctgggtcg	180
ccgaggaag atttgaagc	199

<210> 1932
 <211> 380
 <212> DNA
 <213> Eucalyptus grandis

<400> 1932	
gggatctcta ggaacttcgt gaaaacgcgg acgcccacac aggtggcgag ccacgcccag	60
aagtacttcc tcgcgcggac caaccagAAC cggcgacgac cctcttcgac	120
ataaccacccg actcgtactt tggggtttca agctctacaa tggaggaggg tcatcatcaa	180
gcgcaccacag taccacagctt cctcttttcc ttgctctcgg cgggtttcacc gggaaacggcg	240
gagaaactgc tggaaagtct gcgactaaga aaagagggct gccagtcgaa acccaccgccg	300
tcgaagccca tcgcgccggt cccgatcctt cccatccctc cgtcctcgaa aatggcgggct	360
ctcgacctca acaaggcgac	380

<210> 1933
 <211> 630
 <212> DNA
 <213> Eucalyptus grandis

<400> 1933	
ggaccggcga gttctccgg ggaagaccgg cggagcggcg gcggcgccgg cgccggccggg	60
gggaaaagct cccgcctttc gtcgtttcgc ggtccgtgga ataggcgaca agtcggattg	120
cgttcgcgtgt cgcgcctcgc ttctgtatata agggcgccgtt gctgctgctg ctactggctct	180
gaggagtcaa ccgagctcga gcgttacgcg cttcccgaa gttccgcggg ctagggtttt	240
tttatatttc cctctgtttt tctcctgttc ggcacggctc ttgctctgc tttaaaagga	300
ttggcgcgat tgagctgggc ggagcttgag ggttcggggc gtggcgccgg aagtggagtg	360
gagcgggggg tgggtgtgct cgacatggta atcggtttct gacgatgcc agctttgttc	420
cagcgacacc ggccctccaat tccattgggt cggaggga aa cgttgctcag tctaatcaaa	480
atacagattt tgggtcggtt gagcattcac ttggattccg catagaggat gccatcaacc	540
ttagcagaac agatcctgtc ttaatacaga taaaaccaaa cggctcgagct cttggaactg	600
acattcaagc tcgtgctttt aataagctctg	630

<210> 1934
 <211> 524
 <212> DNA
 <213> Eucalyptus grandis

<400> 1934	
ctttactatt ctaagctcct tactcttggt ttggaatcac taattttctg gtctcacttt	60
cgcttggcct atcacccag agttctctgc agaaactcca cagcgtcct ctgctctttc	120
accaaccatt gtatgcctgg ttttactagg gctaggaaga tgagcatgtc cggagaagaa	180
gagggtgacc tgcgaagggg gccatggact cgcgaggaag acaatttgct catttactcg	240

atcacatgcc	acggcgaggg	acgctggaat	atgttgccga	agagcgagg	attgaagaga	300
actggcaaaa	gctgcagatt	aaggtggctg	aattacctga	gacccgacat	caagcgcggg	360
aatctcacc	cgcaagaaca	gctcatgac	cttgaacttc	accacaaatg	gggcaacagg	420
tggtcgaaaa	tgcgcagta	tctcccagg	aggacagata	acgagatcaa	gaactactgg	480
aggacgagg	tcgacgaagca	agcgcgccag	ctcaacatcg	aatc		524

<210> 1935

<211> 440

<212> DNA

<213> *Eucalyptus grandis*

<400> 1935

gtgctgtgac	aaggtgggag	tgaagaaagg	gccgtggaca	cctgaagaag	accagaagct	60
cctcgcttac	atcgaaagaga	acggccatgg	aagctggcgt	gctttgcctt	ccaaagctgg	120
tcttcagaga	tgcgggaaaa	gctgtaggct	aagatggact	aattatctta	gacctgacat	180
caagagaggg	aagttcagct	tacaagagga	acagaccata	attcaactcc	atgcccttct	240
tggcaatagg	tggctggcca	tagcaactca	tttaccgaag	cgaacagaca	acgagatcaa	300
gaactactgg	aatacgcatc	tgaagaagag	attggcgaaa	atgggaattg	acccggtgac	360
ccataagcct	aaaaatgacg	ccctagtctc	tagtgacggt	caatccaaga	gcgcggctaa	420
gctcagtcac	ctggctcagt					440

<210> 1936

<211> 299

<212> DNA

<213> *Eucalyptus grandis*

<400> 1936

cggacccttc	cgaaaaatgc	agggctcagg	agatgcggaa	agagctgtcg	cctgcgggtg	60
acgaactacc	tgcggcgcca	tatcaagaga	gggaggttca	cgttcgagga	agaggagacc	120
atcatccagt	tgcattggtg	tttggggaa	aagtggctcg	ctatcgcgcc	tcaattgccc	180
gggagagacc	acaacgagat	caagaactac	tggaaacccc	acatcaagaa	aaggctactt	240
aaaaatggga	tgcacccggt	gacacactcc	ccacgcctcg	atcttctaga	tctgtctctc	299

<210> 1937

<211> 377

<212> DNA

<213> *Eucalyptus grandis*

<400> 1937

ggccctctc	tctttctctc	tctctgtgtc	tgtctttctt	gtggatccac	caggctcgtc	60
tttaagaata	tacagcagcg	agcaggcaag	acaacgccc	atctctcttc	tctctctctc	120
tctctctgtg	gctctgtctt	tcttttgttt	cttgcgcttt	tggggtgtgt	gtgttggggt	180
gtgtgaattg	gagcgaggat	ggggaggggg	agactgcagc	tgaagaggat	agagaacaag	240
atcaaccggc	aagtcacctt	ctccaagagg	agggcggttc	gtctcaagaa	ggccacgag	300
atctcgtac	tctgcgagcg	cgaggtcgcc	ctcatcatct	tctccgcca	gggcaagctc	360
ttcgagtact	ccaccga					377

<210> 1938

<211> 278

<212> DNA

<213> *Eucalyptus grandis*

<400> 1938

tgtagcaag	catgtatgta	ctaactagta	gtttttgtaa	agcatgatgt	cgaaaccttg	60
agtagcaagg	tgaagatggc	tgaagagacg	gttaaaagag	taaccggact	gaaccaaatg	120
ctgcattgta	gttcgacat	gtcttctgtg	gggtgtccac	catttgatgg	tagtctctct	180
gatacatcag	cggatgtctg	agtttctgtg	cgagatgacc	caaagcacca	attctatcaa	240
accaattctta	gtaaccgccg	atcatctgtc	gacgatgat			278

<210> 1939

<211> 342

<212> DNA

<213> *Eucalyptus grandis*

<400> 1939

acaggttgct	caattaagag	ttgagaattc	tactttactg	aaacgtctct	cggaacataag	60
ccagaagtac	aatgtagcag	ctgttgacaa	cagagttttg	gaagctgatg	tcgaacacct	120
gagagcagag	gtgaagatgg	ctgaagagac	gggtaaaaga	gtaacccgac	tgaacccaat	180
gctgcatgtg	atgtccgaca	tgtcttctgt	gggtgtgcca	ccatttgatg	gtagtccttc	240
tgatacatca	gcggatgctg	cagttcctgt	gcgagatgac	ccaaagcacc	aattctatca	300
aaccaattct	atgtaacccc	gcatcatctg	ctgacgatat	ga		342

<210> 1940

<211> 376

<212> DNA

<213> *Eucalyptus grandis*

<400> 1940

gctgttttca	catctttttg	aacacgcccc	taaagatccg	ccctcagagc	cgctctgttc	60
cggtggctgc	tgacattcca	cctagaiaatt	cccagccaag	ttcccccttt	ctaagccaga	120
ttgggaagag	ttcatatttg	tccaacagta	gtagtgatt	taaatgggga	ggcactcttg	180
ctgctacaag	cagaagctga	ggaaggcctc	ctggctacct	gaagaagacg	agaagctctc	240
caggtacatc	acgcagtatg	gccatggttg	ctggagctct	gttcctaagc	ttgcaggtct	300
gcagaggtgt	gggaagagct	gcagatttag	gtggattaac	tacctgaggg	ctgatttgaa	360
gaggggcaca	ttctct					376

<210> 1941

<211> 169

<212> DNA

<213> *Eucalyptus grandis*

<400> 1941

aggaattgca	gcacctggaa	cagcaattga	gtggggcctt	atcatctgtc	aaggagaaga	60
aggagcaatg	gcttctggag	cagctggagc	gttcaagatt	acaggagcag	agggctatgc	120
tgagaaatga	aactctgcgc	agacaggtcg	acgagcttag	aggtttcct		169

<210> 1942

<211> 188

<212> DNA

<213> *Eucalyptus grandis*

<400> 1942

cgagatctcc	gtcctctgag	acgccgacgt	cgccctcatc	gtcttctcca	ccaagggcaa	60
gctcttcgag	tacgccacgc	actgttgcat	ggagagatgc	ctcgagcgtt	atgagagata	120
ttcatatgca	gagagccagg	ttctcacaaa	caatgccgaa	accaatggga	actggacttt	180
ggaacatg						188

<210> 1943

<211> 321

<212> DNA

<213> *Eucalyptus grandis*

<400> 1943

ctctttcttc	ctcaatcgga	agggttcttc	aacccaatgg	acggcaacct	ctcattgcaa	60
atcggaatac	atccgacatg	tctggacagag	atgaatgctt	cggtttcgag	ccaaaatgtt	120
gctggattca	ttccgggatg	gatgctttga	acttactaca	tcgacttgga	gtgtgaatcg	180
agctggtaga	atttggcggt	gtgtcccttg	taaaattgag	atccgcaaga	caataagtac	240
ataatatttt	ggagctgtga	tgacataaaa	agaggaaggg	caccctttcc	tctctcatga	300
tcagaacttt	tgataatgtc	t				321

<210> 1944

<211> 905

<212> DNA

<213> *Eucalyptus grandis*

<400> 1944

ctagtggatc	ccaagtctcc	atcatcatga	tctccagcac	cggcaagctc	cacgagtaca	60
tcagccctc	cacctcaacg	aagaagatgt	acgatcagta	tcagcaggcg	ctcgaggttg	120
atctctggag	ctctcactat	gagaagatgc	aagagaacct	gagggaagctg	aaggaggtga	180
acaagaagct	tcagctggag	gtcaggaggga	gggtcgggga	aggactgaat	ggatgatgct	240
tatcggaatt	gtgcggtctt	gagcaagata	tggacaacgc	cgttagcctg	atccgtgaac	300
ggaagtacaa	gacgctcggc	aatcaaactg	acacgcggag	gaagaagaaa	aagaatgctg	360
aggaataaaa	caaaagtctc	ctgcaagact	ggaccaatct	gatcaagcat	ctcgaggagg	420
acgacccgca	cttcggaaag	gtcgacaacg	gcaggaggata	cgaggctgtg	atcggggtata	480
cgacgcgcgc	cgccgcgcgt	cgcttgtaca	cctgcgcct	gcaaccggac	cagcccaatc	540
ttactagcgg	aggagatcgc	gagatcacga	cctacccttt	gctcgagtga	gacgaaggcg	600
tcggaaaccc	ttccgacgct	ctcatattgt	ctattcaatc	tgtctaaagg	ccgattccat	660
ctggaaatcct	gaactcattg	gtatgtcgaa	gtttaggact	ttgttatgtc	atccatttca	720
gcagctaagt	tgttctctat	cagaagctgt	tcctattatg	gaccgagggc	gatttctcct	780
agggcatcat	gtgttttaag	acaagctcat	atataagact	actttaaac	aatcgaaatga	840
gttggtgcga	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaact	900
tcaag						905

<210> 1945

<211> 337

<212> DNA

<213> *Eucalyptus grandis*

<400> 1945

gcggcaagga	gcaactaaat	gtaacactct	gattactagg	gaactctcat	tgtcttttga	60
tggcattttaa	atcaccagga	ggaatcacgt	ggctgaaaca	tttactttgtg	aagaactttt	120
acttaggggga	gcacttaaaa	tgacggaatg	ggctcatcaa	gaaggccctac	gagctctccg	180
tcctctgcga	catcgacatc	gcctcatca	tgttctcccc	ctccgaccgc	gtgagccact	240
tttcgggaaa	aagaagatgc	gaggatgtct	tgaccggttt	cattaacctc	accgaccaag	300
aacggacact	ctagatgtgc	caggatcgcc	gcacacg			337

<210> 1946

<211> 301

<212> DNA

<213> *Eucalyptus grandis*

<400> 1946

caaaccttcc	cagggtttcc	atttccattt	ccttcataga	atgctccgtt	cctttcttat	60
cccttttttg	gtactctctg	ttctcatggt	cctttcataa	agttttctca	tctcttaacc	120
aagactggta	agagagagag	agatagagag	tttattagtg	ggtaggggtg	tttaaaaatg	180
ggaagaggga	gggttcagct	gaagaggata	gagaacaaaa	ttaacaggga	agtgaacctt	240
tccaagagaa	ggaatgggct	cctcaagaag	gcttatgagc	tctcgtcctc	ctgtgatgct	300
g						301

<210> 1947

<211> 354

<212> DNA

<213> *Eucalyptus grandis*

<400> 1947

gccaaagtgc	accgccgttg	ccccacatta	tctgtgatat	gtaaacgttg	tggggcctctg	60
ttagctacaa	tatgatggc	atcattttaag	cttttgcgta	atcatcagtg	ttctcaattt	120
gcataaacac	attaacggat	cttgacagat	ggaaaagcatt	ttagagaggt	acgagagata	180
cacttatgcy	gagcgacgcy	aagtgccac	tgattccccct	caagtgcaag	gaagttggct	240
gcttgaatat	cccaagctcg	tggctaggat	cgaagctctg	cagaggaaca	taagaaacct	300
gagcgaggaa	gagcttgatc	ccttgagctt	gagagagctg	cagtatattg	agca	354

<210> 1948

<211> 456
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1948
 gtttctctt caggagaaag caaggagctg tagaggaatt gaaaatggtg caagaagtcc 60
 gaaagggctc atggacagaa caagaagatt tccaactggt gtgctttgtt ggactttttg 120
 gagatcgccg atgggatttt atagcgaagg tatcaggttt gaaggtggcg ggagaaaata 180
 ataggtatgt tegttttaaa gcttgggggt ttttggaaag gagctacttc taacgcacca 240
 gctttatttc aggatgtaat agaacagtaa aaagctgcag actacgctgg gttactacc 300
 tgcactctgg cctaaaacga gggaagatga cacctcaaga agagagactg gtgctcgaac 360
 ttcattccaa atggggaaat agatggtcaa gaattgctcg caagctacca gggcgaaagg 420
 acaatgagat aaagaactat tggaggactc atatga 456

<210> 1949
 <211> 382
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1949
 atttttcaac tcccccccc caccocgaat caaatcccat tccctctctc cctccctccc 60
 ttttttccc ccaattcttt gttgctttt caagcaccca cgcccccaa tctccaaagg 120
 catcaatcaa gctcaaggac catcacctca agaagaaaga aggaaagaaa gagagaagga 180
 cgggagaccc gacagagggg cgcgcgcgca cgagacatgg gacgatcccc ttgctgcgag 240
 aaggcgacac ccaacaaggg cgcgtggacc aaggaagagg accagcgctt catcgactac 300
 atccgcctcc acggcgaagg ttgctggcgc tccctcccca aatctgcgag gcttctcagg 360
 tgcggcaaga gctgcaggct ca 382

<210> 1950
 <211> 371
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1950
 gttgagcagg tacagttttc tgaagagagt tttgaagtag agaacaagct cgagccagat 60
 cgcaaaatcc agttggcaaa agacctcgga ttgcagccac gacaggtagc gatattggtt 120
 cagaatcgct gtgcacgggt gaagacgaag cagctagaga aggattatga aactttgcaa 180
 gcttctttta acaccttgaa gtcagactac gacactctca tcaaggagcg gaatgatctg 240
 aaagccgagg ttcttaacct caccgacaag ctgcttcaca agggaaatga gaaggagagt 300
 tccgagtcgt ccagcaaatc atctcaaggg ctattccaga accccattgc tgattctggt 360
 tctgaggagc a 371

<210> 1951
 <211> 356
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1951
 aaaaagcata agctccctga cccataatcc ctagtatcga tggccagggt tcccagggtt 60
 gacaagagca acagcaagaa gacagtgaag aaggcgctt ggagtgcgga agaagaccag 120
 aaactggtgg cttatatcaa gagatatggc atttggaaact ggactcacat ggccgaacc 180
 gccggtttag cgagaaacag aaagagttgc cggcttcgat ggaatgaacta ctgaggccc 240
 aacatcaagc atggaacact caccgaagaa gaggaaagaa tcatatttaa cttgcaccga 300
 gttcttggtt accgttgggc cagcatagcg agcagacttt cagggaaggac ggacaa 356

<210> 1952
 <211> 475
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1952

ctcccccttc	ctggctctcg	ctctctctct	ctctctcagt	tctttctcgg	acgggtgtct	60
gtcgctggct	tttgtcggt	catcaacctga	ggccgcgtct	gcaagcaagt	gaagaaggag	120
gacaaggaat	atggcgagag	agaagatcaa	gatcaagaag	atagacaatg	tgacggcgag	180
gcagggtgacg	ttttctaaaga	ggagacgagg	gcttttcaag	aaagccggag	agctgtcggt	240
cctgtggcgat	gcgaggtgcg	ctgtcgctcat	ttctcggct	accggcaacg	tctttagatg	300
ctccagctcc	agcatgaagg	acactcttga	gaggtacacc	ctccaccaca	ataatcttga	360
gaatatggac	caacctcttc	tcgagctgca	gctggagcat	agcaataaca	tgagggttaag	420
caagggaagt	gcagaaaaga	gccatcgact	caggcagttg	aggggtgagg	atctt	475

<210> 1953

<211> 541

<212> DNA

<213> *Eucalyptus grandis*

<400> 1953

atcgcccccg	ttctctccct	ctctctccct	ctcccccta	acgtttcttg	ccctcttctt	60
tgctctggaca	aaaagatggg	aagaaagtgc	tctcgctgtg	ggaacatagg	ccataactca	120
aggacttgca	caactttcat	gggggcagca	agtgcttctg	ggctcaagct	cttcgggtgtt	180
caacttgacc	tatcttcttc	ttctctccct	tcatcatcag	catctagtgg	ttctgctcat	240
ccctattcac	ttgtcataaa	gaagagcctc	agcatggatc	gtctgtcttc	ttctcggccc	300
ttctctcgt	ctccatcttc	atccctctcc	tcgccaagag	tctttgtctg	tgaacctctg	360
aataagacct	ccctcgata	ttctctgat	ggcctcgccg	ctagatccca	ggagaaaagg	420
aaaggagttc	cgtggacgga	agaagagcat	cggacattct	taatggggct	agagaagatg	480
gggaaaaggcg	attggagagg	catctccagg	aactatgtga	ccacgagaac	cccaacccaa	540
g						541

<210> 1954

<211> 437

<212> DNA

<213> *Eucalyptus grandis*

<400> 1954

cgcgggtggc	gtcagataga	agagcatgta	ggaacaaaa	ctgcagttca	gatacgaagt	60
catgccccaa	agttctcttc	taaggttgct	cgcggggtaa	gtggcagcag	cgaagggtgtg	120
attaaaccaa	tfgaataacc	ttctccacgg	ccaaagcgga	agccaatgca	tccatatcca	180
cgcaaatctg	tcgattcaaa	ggagggtgaa	ctgtctctatc	aacaagagag	gtctccatct	240
ccaatctctt	cggtagcaga	tgaaaacact	ggatctccta	cttcagtttt	gtctcgctcat	300
ggttcagaca	tgctgggattc	agcatctttg	catcaacaaa	acagatgctc	ttcaccagct	360
tcattgtacca	ctgatgtacc	ctctattggt	ctagctgtaa	ttagaagaca	acctgaaata	420
ttcaaagaag	aagataa					437

<210> 1955

<211> 470

<212> DNA

<213> *Eucalyptus grandis*

<400> 1955

attcggtcac	gagttcactt	cgtcgctctg	ctcgtcgtcc	tcctctgctt	cctcgcaaat	60
ctccactcgg	gagaaactct	ataaagcatc	cctcggtctat	ctgtcggaatg	gcctgctggg	120
tagatcccaa	gagaagaaga	aaggagttcc	atggacagag	gaggaaacaca	gaaccttctt	180
ggttggggctt	gagaagcttg	ggaagggtga	ttggagaggc	atctctagga	gctatgtgac	240
cacaagaaca	ccggcccgag	ttgcaagtca	tgttcagaaa	tatttctctc	ggcaagttag	300
cttcaacaa	aaaaagcgcg	gctcgagcct	ctttgacatg	gttgatgtca	aaaccgcggc	360
gggtgatcgt	ttaggcagtt	tgacggccaa	gccgagtgag	tcagttccta	attgcaaaat	420
gggaaccttg	atgtctcatt	tgcaagtcca	tgatgccaga	accactcage		470

<210> 1956

<211> 384

<212> DNA

<213> *Eucalyptus grandis*

<400> 1956
 ctgaaatttc gtcttcaagc catggaacaa caggcgcaac tacgcatgc cctgaatgaa 60
 gcattgactg ctgaggtgca acgattgaag ctgctgcagc cagagctcaa ctgcgaatct 120
 catccttcaa agtgcgatggt ttccacagctt cctgtgagct cccaatagt ctagctccat 180
 cagatgcacac agcagcagca gtcttcagcaa caaactcaat cacagcagca aaatggtaac 240
 acaaccacaa agtcagagtc gaatcaatag gacgtgggtg gtcccaaac tcgcggcgct 300
 ggacaaactc cacttgtctc ggttcttcga caccctgcag tagttctcta gtgcacccat 360
 tcattcatta gtttttgcac atgc 384

<210> 1957
 <211> 388
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1957
 gtttctcttc caggagaaag caaggagctg tagaggaatt gaaaatggtg caagaagttc 60
 gaaaggggtc atggacagaa caagaagatt tccaactggt gtgctttggt ggactttttg 120
 gagatcgcc ctgggatttt atagcgaagg tatcagggtt gaaggtggcg gagaaaaata 180
 ataggattga atagaaacag aaaaagctgc agactacgct ggggttaacta cctgcaccc 240
 ggctctaaac gaggggaagt gacacctcaa gaagagagac tgggtctcga acttcatttc 300
 aaatggggaa atagatggtc gagaattgct cgcaagctac caggggcgaac ggacaatgag 360
 ataaagaact attgaggagc tcatatga 388

<210> 1958
 <211> 455
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1958
 tgaecgatgt tgtggaggag gaaagagacc ggaaaggcct ttcttttgc catatgacgg 60
 ggaggaataa ggagacgatg attatgatga gtatttacac caacctgaga agaaaaggcg 120
 attgtctatc gagcaagttc tgtacttga gaagagcttt gagactgata acaagcttga 180
 accagataaa aaagtctcagc ttgcctaaaga actcgggttg caacctcgtc aagtgtctat 240
 ttggttccaa aatcgaaggg caagatggaa aactaagcaa atggagaagg atttcgataa 300
 attgcaagct agttttaact gtttgaagtc tgattatgaa agtctctcca atgagaagga 360
 gaagctcaaa gctgaggtta ttcatctgac acaccagcta gagcaaaagg gcaacggaa 420
 tctgaacat tcgacatatt tgaacaattg cacac 455

<210> 1959
 <211> 965
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1959
 aagagaaaag atacaatccg ccgtggaccc aagaagggtc aagcccgctc tctgcacgat 60
 gatgggtagt agtagtagta ctacttatct tcogtgaggt ctctcgaaat aggggtttct 120
 tgtttttcgc caacccccca atatttatct ttcttttct tcctttttt cgtctctctc 180
 gcagttcacc tagaaaaagc acgagggtct cgcaccagtt ccgtacgggg ctgcttcagt 240
 cgttagcgtg tactatctcg tctcaggtgg tgtttcgct ttatggggat gtccttcggc 300
 gggggcggtt cgaagattct tgtagctccg tagcttgtcc tgcgggattt ggttggcgcc 360
 atcgtcaggt ttcttccagt taaagttagc atttttaagg ggagcgaggc cgtttgagct 420
 ggtaaagtgc gaagcttttt gagttcggcc gccagggttg tgcctagag ataactggag 480
 gcgaaagggt gcgttcgggt ccggtcagca tccgctgact caggagatgg ttgggggttg 540
 ttggtggcgg ccggtgatgag gattcatggg tagtaggact agagtgtggc gtgggtgaga 600
 tgatggcaga gtttgaaacg gcattgcagg ctctgctccat caattaccac cttcgaaattc 660
 catgggatca gaaggaaact ccattcgctt ttctcgaaat acagactttg gaacacttga 720
 gcagttctct ggataccgca tagaagatgc agttgacctc agcagaaatc ctgcttccaa 780
 tcagatgaaa tcaagtgcgc aggtctcttg ggctgatgct caatttggct ctttgaataa 840
 gtccctttca tctcagaca gaaatcttct tgtgaatat gtgggggtctc agactctatc 900
 tatgcataga gaatcacact caaacttagt atcaataccc ggtgctcatc gtgagaactg 960
 gggggg 965

<210> 1960
 <211> 599
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1960
 gtccggtccg gttctctccc tcccttctct cctccttctc tctctctctc tctctctctc 60
 tctctcgcgc tccaaccgta cggactctcg gttttgcgc gaaacggaa ggaagcgacc 120
 cggctccctcg cgtgcgcggg tgcgagagaa tgcctccccc acgcgcgcgc acccccgagc 180
 tcgcgcggcga cgaagagctcc cggcgccgag cggcgccggg ggagatcatg ctgttcgggg 240
 tgcgggtggt cgtggaatcg atgaggaagt gcgtgagcct gaacaacctg tctcagtacc 300
 agcacccgca ggaagcgca cgcgccaaag ccagcgcgcg gacgcgcgcg aacaaggaag 360
 aggcgcgcaaa aggtctcgca tcggccgacg acgcgcgcga caaccccgcg ggtggccgct 420
 agcgcaagag aggaattctc tggacagagg aggaagacag gctgttcttg ttgggattac 480
 agaaggtggg gaaagagagat tggagagcga tatccaggaa ctttgtgaag accgcacgcg 540
 ccactcaggt cgcgagccat gcccagaaat atttctctcg ccgaagcaac ctcaatcgc 599

<210> 1961
 <211> 377
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1961
 ggagaaagctg gcttctgggt cgaactgagc gccgagaatt agacatcagc atagccagtc 60
 tatggcaggg tcgacagcta ttaagccgca gatgcttatg tcgggttcag aggatgcac 120
 tgcgtcgaag gccaaagagg ccatgtctgc tgcgaagctt cgtgagcttg cactgattga 180
 tcccaagcgt gcaaaagagg tctgggcaaa cagacaatcg gctgcaaggt caaaggaaag 240
 gaagatgcga tacatagctg agctagaacg gaaagtacaa acttacaac ctgaagcaac 300
 aactttgtct gcacagctcg ctctgctgca gagagacaca aatggtttga ctgctgagaa 360
 tagtgatttg aaactgc 377

<210> 1962
 <211> 317
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1962
 aagtaaaatc ccctctcgcg tctcttttct tttatgtaca ttccaagaac agcgacagat 60
 aaggcccccga gatctgcaag tcttcttcac actactcgct gatggctgat tctgaacatt 120
 cttctcttga tgacacttac gtggactcta gagaagagac aagtgaagaa tcaaaagctag 180
 atttctctga agatgaggag acgcttgtaa ttagaatgta caacctggtt ggagaaaggt 240
 ggtctctaat tgcctgtaga atcccaggga ggacagctga agaaatcgag aagtactgga 300
 attccagata ttcaaca 317

<210> 1963
 <211> 471
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1963
 ctctctctc ataatgcata attcacagcg cgggcacaag gcacgaaaag ataaaaaaa 60
 aaacgatcgc cgtgagggag cctattctg ccgacacgaa ctcggaacct ttctgctgatg 120
 aagaacacgt gattccgagt tcttcgcagg ctcttgagtc cgcctgggtt cctactctct 180
 cgaccgctca tcatggttca aaatcagtg tcaattttga ggacgtttgt ggaggaggag 240
 acacaaatc tgcgcgcagg ccataacctc cagacagtga tctgaaggaa gaagcgcgtg 300
 aagagagacta cggcgccggg aactttcage ctctgggtga gaagcggcg cttcggcgcg 360
 accaagtccta tttctcagag aggcactttg aggtcgagaa caagctcgag ccgagaggga 420
 agatccagct ccgcaaggac ctgcgctcgc agccgaggga ggtcgcgac t 471

<210> 1964

<211> 372
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1964
 tgacactgaa gattcgaaga agaaagagag gcatattgtg acttggtctc aagaggaggga 60
 tgataactct cgggagcaaa tcggtatata tgggaactgag aactgggtcga ttatcgcatc 120
 aaagtccaag gataaaaaca cgagacaatg cagaaggaga tggtagacatc atttgaattc 180
 tgacttcaag aaagggggtt ggtcaccaga ggaagatgtg cttttatgtg aggtctacaga 240
 gattttcggc aacagatgga cagaaatagc aaaggtggtt tcaggcagga ctgacaatgc 300
 cgtaaaaaat cggttcaca ccttgtgtta gaaaagagca aggtacgaag ccttagcgaa 360
 agagaataca ct 372

<210> 1965
 <211> 424
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1965
 atgcaatttt gagcgtcgcg agtaagccgg agcgaggagg gagcgatggg caggcgagccg 60
 tgctgcgaca agcttggggg gaagaaaggg ccgtgggacgg cggaggaggga ccggaagctg 120
 gtcaacttca tactaccaca cgccaatgc tgcgtggcggg cgtccccaa gctcgtcggg 180
 ctccgcgcgt gtggcaagag ctgccgcctc cgctggacca actacctccg ccccgatctc 240
 aagcgtggcc tcctcaatga agccgaggaa agcctggta tcgactctcca tgccactctc 300
 ggcaataggg ggtccaaaat agcagctaga ctaccggaa gaacggacaa cgagatcaaa 360
 aaccatgga acaccatata caagaagaag ctcatagga tgggcattga tccagtcact 420
 caca 424

<210> 1966
 <211> 427
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1966
 cccggctccc gctcgtccaa tcggcgcgctc gagaggaaga aaggtaacc atggacggag 60
 gaagagcatc gaagggtttt aattggtctc cagaattgg gtaaggaga ctggcgaggg 120
 atagctcgtg actttgtgac tacaaggact cctactcaag tggcaagcca tgcccagaag 180
 tattatctcc ggcagagtaa tgctggccga agaaagaggc gctccagcct ttttgacaga 240
 gctccagata tgggtttgct tctctatgat gttgcttctg cacattcatt gcactccggt 300
 caaatatccg gctcgtgcat gttttaagat gttttcttag ctcatgctga catatgcttt 360
 aaccatgcac tagtgatgat tacatgataa gggccattcc tcttagacct tgggacaca 420
 tcaaatg 427

<210> 1967
 <211> 373
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1967
 cttgaaactt ctccgctctt ctctctctc tcttgaaagg aaggatgaga aaaccttggt 60
 gtgacaagca agacacaaac aaaggagcat ggtcgaaagca agaagaccag aagctcatcg 120
 actacattcg caagcagcgc gaaggatggt ggcgaactct tctaaaggct gccggtctcc 180
 tccgcttggg gaagagttgt aggtctaatg gataaacta ttgctggcct gacctcaaaa 240
 gaggcaactt tgctgaggat gaagaggatc ttatcatcaa gctctatgct ctctaggcca 300
 accgatggc gctaattgct ggggattgc ccggacggag agacaatgaa gtgagaagact 360
 attggaactc aca 373

<210> 1968
 <211> 197
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1968
 gggtgcgccga ggaagacgag aagctcttca actacatcac ccgattccgc gtcggctgct 60
 ggagctctgt accgaagctc gccggactcc agagatgtgg aaagagttgc aggttgaggt 120
 ggataaacta cctgaggcct gacctcaaga gggggatggt ctctcaagaa gaggaggatc 180
 tcattgtcag tctccac 197

<210> 1969
 <211> 365
 <212> DNA
 <213> Pinus radiata

<400> 1969
 gcaaaaatctt atttgggttc ccttacagaa actatacagt cccatgaatgc tgagcttgaa 60
 agaactagat cggagttggt tgaagcaaa aagagagagg aagagattat tttcaaaagaa 120
 gctgaaaagag tagagaagaa taagagagaa gtggaaaatc tggaaactca tcttctgcaa 180
 actactgcag aagctggggc agctaaactg gaactagaga ctgcttatga agaggtgcag 240
 agcgcaagac ttgaaactgc gcaattgagg gctgctttgg aagccacaga gggaaaattt 300
 gaagcaatgc tgagtgcagc taggttgagg gcagagcatg tcaaaggagc tattgagaag 360
 tataa 365

<210> 1970
 <211> 260
 <212> DNA
 <213> Pinus radiata

<400> 1970
 gaaatattgg tgactcaaat agagcaactt caaagaaaagg aacggatggt tagcgaagag 60
 aataatttcc tccgaagcgg gattgtcgat cccattccg ttttgacaac tcttgcaagt 120
 ggatctggaa gccctccaag aagtgaagtc gagactcaac tggttatgag accgccagtc 180
 tcaaatgctg attttctttt taatagtctc cattgataat cactgtattc atatctttgt 240
 tattaattta ttatgaaatg 260

<210> 1971
 <211> 332
 <212> DNA
 <213> Pinus radiata

<400> 1971
 tctctctggt gtggggggca ctcaaaatgg ggaagacgaa gatggagatt aaacgcattc 60
 aaaaccctag ccgcgcgcag gttactttct cgaacgcgaa gaacggatgt ctcaaaaagg 120
 catctcgact ttctgttctc tgcgatgctg aagtcgcctc gatcattttc tcggaaactg 180
 gcaagatctg cgagtttgca agccacgacg acatggcaac aataactgaa aatatcgaa 240
 tataccgga aacacatgga aacatggagt cctcgctggt ccaaagcggt aagattgggt 300
 aatcaacact caaagcgctg cgtgagaaga tg 332

<210> 1972
 <211> 413
 <212> DNA
 <213> Pinus radiata

<400> 1972
 cttcgagggt ctaattggct cacaatacct tcaattggat tgacaagcat agaacgcgtg 60
 gaagttcaga ctcaactggc catgagacct ccacatgcca cagagatgga cgaacaactt 120
 atggagtgtg acaactgtgc actatctgga tgatgttttt ctgtttctgt tacataatat 180
 ggccaactgat gacaccatc tttattttgg ttttgcctt aaaaatgact ctttctttca 240
 ctgacttttg atggaactga tgatagtga tttttggtcc tcactcttga gcaaatgggt 300
 atgggtacct gttttggccc gaggccttgg aggatctact ctctatatgt taactgttta 360
 cttttacatc ttgtgctcac tgactcatat gatggacttg cccacatatg atg 413

<210> 1973

<211> 521
 <212> DNA
 <213> *Pinus radiata*

<400> 1973
 agaagatggg agcttgggtga tctgtgaaag atctctctct gcggctcaag gtatgcctat 60
 ggtatcacag tctcaaaagct ttgtgcatgg tgaactctta tctagtgggt atttgatccg 120
 accctgtgaa ggcagaggag cattagtcac catggttgat cacaggaaact tagaggcttc 180
 aagtgtccct gaagcacttc gtcccttata tgagtcacat acattctttg cacagaagat 240
 gcagagttag gcttctttatc atcttcaagg taaagttcaa ccggaataga ttctcttctc 300
 aaaaaaacct caacagccat gtaatgtacg gtcatacagt caacggcttt gcagagggtt 360
 taatgaggca gtcaaacacat tacctgatga tggctggatg tcaattgtcca aagatgggct 420
 gggggatgct actattttgt taaagttctt gtc aaattgc gaaacacaaa tgtcatcgct 480
 aaatagccta tgttcaacag acatgggcat cttgagtgaa a 521

<210> 1974
 <211> 461
 <212> DNA
 <213> *Pinus radiata*

<400> 1974
 gaaaatgaaa gccttcgagc tcgtttaagg catatgaatg gcgatgacat caattcgttg 60
 aagcttcccg aactcttcca tctcgaacag cagcttgaaa cggccgaac ccaagtcga 120
 aagaagaaagg atcaagtttt agacaacgaa aaaaatcaag gaaggacaa gatgcgccgt 180
 aaggaagcag agaactcgtc tcttcacgaa atgcttgacc agcaccatgg acaaatggag 240
 gaggataaac ctcagattaa ttctctatct tgccaacct taaatagatc ggatctactc 300
 ttccctgcat cactactccg cctgcaacaa aatcagccaa atttgagga tattggatat 360
 taattactga acggaccatc tgtgtgcatc ataagagaa ggtcatggac ttctcagtaa 420
 cagtcacatta tgaaaattcg aagttttgtg gga aaaaaaa a 461

<210> 1975
 <211> 499
 <212> DNA
 <213> *Pinus radiata*

<400> 1975
 tgagccccc ggtggagcac cgaccttcca gccacatga agacgccacc atcatacaag 60
 cccatgcgcg gcatggcaac aagtgggcta cgattgcccg cctcctaccc gggcgcaacc 120
 acaacgctat caagaaccac tggaaactcga ctctgcgacg tgcgtatcat ggcgagaaaag 180
 accagagcaa cgggctagct gtgaacttgg agtcggcagc tgaggacaaa gaaacgatga 240
 ctccgatgac acctgtcaca gccacggcaa cggcaacggc aacggcaatg ccagtggtct 300
 tagtgtttcc aacggctcga gacaacgtca ggaagcggag caacagtagc tccagctgca 360
 atgacaatcc agagagatgc gaggtcgaat cctgtaggct taagaggctc aattttctcg 420
 aatccccatc tagttctgaa aatattaata ataatacaaa taatgaagaa gctgttagtg 480
 gccattgcga ttcgggcgcg 499

<210> 1976
 <211> 419
 <212> DNA
 <213> *Pinus radiata*

<400> 1976
 ctcagagctc gacaaaaacct acatacatc gtctgtcatc cctcccagaa atacctagtg 60
 agggcgatcg aggtcgaaagg gggcatttta cgccattgaa gcggtgtgca tagggtcaac 120
 tctgagaact gattgtgtct tccttcggag ggagaggggt agcgaggttc agaaagagag 180
 agaaagagaa agtagtctca agggactggt taaaattggg cgaagtcagc tccagctag 240
 aggatagaaa aacaaaataa atcgtcaagt aacggtttcg aagagacgga atggcgctat 300
 aagaagagcg tcagagctgt caatcctgtg tgatcggaag gtggccttaa ttgtcttctc 360
 caacaaaggg aactctctat agttctccag ttcagatag accaagattt tggaaagat 419

<210> 1977

<211> 459
 <212> DNA
 <213> *Pinus radiata*

<400> 1977

gcaagctggc	ctccagcggt	gcgggaagag	ttgcaggctt	cggtggatca	actacttgag	60
accgatctg	aagcgaggca	cattctctcc	gcagggaagaa	aatctcattg	ttgaactgca	120
ttcagtcctc	gggaacagggt	ggctctcaat	agcaacacac	ctgcccgcaa	gaactgatga	180
cgagatcaag	aacctctgga	actcgtgcat	taaaagaagag	cttaggcaac	gaggcataga	240
tcctaacacg	cacaggcctc	tcagcgagggt	gaatgccgag	gcaggggatt	ctaagaacga	300
taacagcaat	aaagaagtcg	aaactcaggc	agccatggac	gaatctcatg	ttctcgagg	360
gaacgaattc	aagcatctga	atgcaattcc	tagggctgat	acggccaatc	ctaaattctt	420
tcattgtccc	gttgaggaca	acactttgat	tgctagcga			459

<210> 1978
 <211> 331
 <212> DNA
 <213> *Pinus radiata*

<400> 1978

ggagagtga	ccaccgagat	ccacgcagtc	gaagagaaag	agaaatctgc	aggaggagtt	60
gaaatgagg	tgacacagat	ggcaagggtc	ccatttttcc	tcacaaacca	aagttaaaaa	120
gggtctctgg	tcgcctgagg	aaagatgagaa	actcatcaat	tatatgatga	agaacggcct	180
tctcggctgc	tcctggagct	atgtggccaa	gcagatttgg	ctgcagagat	gcgggaagag	240
ttgcagactg	agatggacta	actacttaag	tcctggcctt	aagcgggggtg	caatttcgac	300
tgaggaggag	caattgatca	tacacttaca	g			331

<210> 1979
 <211> 375
 <212> DNA
 <213> *Pinus radiata*

<400> 1979

gttctatcaa	acttcttctc	caccataccc	atttccatta	gaaggctgaa	ttctcagatc	60
caatttgttc	cagccctctc	gcgcagagaag	aagatgggaa	gagcaccctg	ttgtgacaag	120
gcaaatgtca	aaaaaggacc	ttggtcacca	gaagaagaca	caaaactcaa	ggcgtttatt	180
gaacagcatg	gcactggtgg	caattggatt	gctcttcacc	agaaagctgg	tctgaaaagg	240
tgtggaaaga	gctgcaggct	tagatgggtg	aactatttga	ggccagatat	aaggcatggg	300
ggtttctcag	aagatgaaga	taacatcatt	tgtagcctct	atgcaagcat	tggaaagcatg	360
gtgtctataa	tgca					375

<210> 1980
 <211> 749
 <212> DNA
 <213> *Pinus radiata*

<400> 1980

gagcttcac	cgccattatt	gggtttcaat	tcgatcttga	tttgccagag	acgatgtgaa	60
ttaccattct	gtgggcaaaa	gcgagagagg	aggagaatgg	tgaggggaaa	gacccagatg	120
aaaaggatcg	agaacgacac	gagcaggcag	gttacgtttt	ctaagcgag	gaatgggtta	180
ctgaagaaga	cttatgagct	ctctgtgctc	tgcgatgccg	aagtgggact	tataattttc	240
tcaccaagag	ggaaactata	tgaattcgcc	agtcccagca	tgaggagagat	tttgaaaaag	300
tataaaaaac	gttcgaagga	aaatggcatg	gctcagacaa	cgaaagagca	agatactcag	360
tattccaaac	attccaaaca	aaagctcgca	aatatggaag	aacagattag	gattcttgaa	420
tcaaccagaa	gaaagatggt	gggggaaggg	ttggaatcgt	gttcaatggc	agaattcaat	480
aagtttagaga	gccaaagctga	acgaggaattg	agccatatatc	ggggtcgaaa	gacggaataa	540
ttggttgacc	aaatagaatt	tcttaaaaag	aaggaaagctc	tcttaagcga	ggagaaagcc	600
ttactcagta	gaaagtggtg	tgatcgtcaa	tcctgggagc	gttccgggtc	aacatcatct	660
tcaattggat	tgggaagcat	cgagcagatc	gaagttgaga	cacaactggt	tataagacgc	720
ccaaatgcac	aggatcactg	ttctgtaaa				749

<210> 1981
 <211> 339
 <212> DNA
 <213> *Pinus radiata*

<400> 1981
 cttggctggg gaagacaacc cgctgcatta cggacattta gccagagatt gtgcaagggt 60
 ttcaatgagg cagttaatgg cttcacagat gatggatggg ctttgatggg taacgacgga 120
 atggaggatg taactattct cgtcaattca tctccaagca aactgttcgg tcaacagttt 180
 gcttcttcgc atgggcttcc tgctcttggt gggggcatcc tatgtgcca ggtctctatg 240
 ctattacaga atgttctccc agcattgctt gtctgtttct tgcgagaaca tgcatacaga 300
 tgggcagata gtaatatgta tgctatttca gcagcctct 339

<210> 1982
 <211> 373
 <212> DNA
 <213> *Pinus radiata*

<400> 1982
 ggattccgac cttccggctt aaagctgctt catttctgtg tgtattgaag atggggagat 60
 ctccctgctg tgaaaaagct catcaaaaca aagggcgctg gaccaaagaa gaggacgac 120
 gctctatcgc ccaattcgca actcacggcg aaggttgctg gcgctcgctt ccaagggcgg 180
 cagggctgat gcgctgcggg aagagctgca ggctccgatg gataaactac ctgcgctcctg 240
 atctgaagcg tggaaacttc tcagaagaag aagacgaact catcatcaaa ctccactccc 300
 tactcgccaa caagtgggtc cttattgacg gcagattgac cggggcgagc gacaacgaga 360
 taagaacta ctg 373

<210> 1983
 <211> 404
 <212> DNA
 <213> *Pinus radiata*

<400> 1983
 aggcataaag tgttattatt gagaacttga ctgtggctga gatattcagg gatggaccgt 60
 tcaaaactctg cgactggaga agaagatgta ctgtcaagat gcagggaagaa aaaacgtttc 120
 atgaagctgg caattgagaa caggtataaa ctacgaacag ctcatgtggc ttacatggat 180
 tctcttaggc gtatggggac cggctctcgg cttttgtcgt aaggcgaaac gatgtcggag 240
 tcttctcatt ccaacatcac catagggact tctgaacttg ctgtgtgctt gcctgagaaa 300
 tccgtatccc catctccatt tccatctcca tcccttccac tttctcaacc tcaaaagtc 360
 cgttcagaga gacgagaatc tgcattctca ctgcagacgt tctc 404

<210> 1984
 <211> 332
 <212> DNA
 <213> *Pinus radiata*

<400> 1984
 cggacggcctt ggttcaaaac tctcgtgaaa gaaaaaaagg cgttctcttg acggaagaag 60
 aacataaaat gtttttatta gggcttcaca aattgggaaa aggcagactgg agaggtattt 120
 ccagaaactt tgcacttccc agaactccta ctcaagttgc tagccacgca caaaaatatt 180
 ttcttaggca gagtaatttg aacaaaagga aacgaaggtc gagcctgttc gatatacca 240
 ctgattcgat ggaagattgc tatcaaggaa tcccgagct gtacacgggt atgcacgac 300
 tcagcctggg ccagaattca tctctgacct ct 332

<210> 1985
 <211> 526
 <212> DNA
 <213> *Pinus radiata*

<400> 1985
 ctctctctcc gtctccaaac ccaagctaag gaaaggcctc tggctcgctg agggagatga 60

taaacatc	aactacatga	tgaaaacgg	ccaggggttc	tggagcgatg	tcgccaagca	120
agctggctc	cagagatg	gaaaaagctg	taggctgagg	tggattaact	atttaaggcc	180
cgacctcaaa	cgcgggtgat	ttccaccca	ggaagaacaa	ttgatcatc	acttgcatc	240
cattctcggc	aacagggtg	ctcagatg	agcccgctt	ccgggacgta	cggacaacga	300
gatcaagaat	ttctggaact	ctgcataaa	gaagaagt	aaacacctt	cggcctccac	360
caacaacagt	aaatctatct	ctgcacctaa	tctgaccagt	accatgaatt	catcgatcac	420
gcctttct	gaatcgctg	cggagccatt	ggaggtcatg	gcaacaagg	atcagccatc	480
gaatgcttt	aatcatgaag	tgcccatcgc	agaaaatcaa	gttttg		526

<210> 1986

<211> 366

<212> DNA

<213> Pinus radiata

<400> 1986

atcagactca	catcaaacga	aactggagcc	gtgaaggggt	agttgcggtg	ttaaattcta	60
ggacagcttt	ccgtattaga	aagagggccc	ctttacggga	gtcggcacca	aaccagagtg	120
gagagaata	atgggtagg	ctccctgctg	cgaaaagggt	gggctcaaga	agggcccctg	180
gacgcggag	gaagatcaaa	agctcctcgc	ttacatacag	gagcacggcc	atggcagctg	240
gagggctctg	cctcagaagg	ctgggttgct	aagatgcggg	aaaagctgca	gattgctgtg	300
gactaactat	ctaagccag	atatcaagcg	gggaaagttc	aaccacag	aagaacagac	360
aattat						366

<210> 1987

<211> 476

<212> DNA

<213> Pinus radiata

<400> 1987

ccgaactccc	cgtctgtatc	aaatgggatt	aaaaaaggga	ccctggacac	ctgaagaaga	60
tcaaatactc	atctccata	tcaacaagca	tggtcatgga	aattggcggtg	cgtgcccaca	120
gcaagcagga	cttatgcgat	gtggaaagag	ttgtcgctg	cggctggacaa	actatctgag	180
acctgacata	aaacgtggga	acttcagctc	caagggaagag	cagactatta	ttcatctgca	240
tcaaatcctt	gggaaccgat	ggctcagctat	tgctccacac	ctccccggaa	gaacagataa	300
tgagataaaa	aatgtatgga	acactcattt	gaaaaaacgc	ctcctgcmaa	ttggggtaga	360
cccagtaacc	cacgcgccta	gaggatacaa	tgatctaac	tgctacacg	ctgtgaatat	420
ccgggaccat	catggcgagc	aggccgatca	tcagctccaa	agccatgtct	gogttt	476

<210> 1988

<211> 151

<212> DNA

<213> Pinus radiata

<400> 1988

ggacacctga	ggaagatcga	attcttatct	cctatataaa	aaggaatggc	catggaaaagt	60
ggcttgcaact	gccgaataac	gcaggactta	gccgatgcgg	gaagagttgt	cgactgcggt	120
ggacaaacta	ttcgagacc	aacataaaac	g			151

<210> 1989

<211> 461

<212> DNA

<213> Pinus radiata

<400> 1989

gtaacccatc	aggagttctc	ttctgtccaa	ccccccctaac	tctccacttc	acagatctca	60
tgagacttaa	ctgtttctaa	cgttgcaagg	caataaccct	ctttgtctct	tggtctgtat	120
tttttgcctt	ttgaccacag	agcagggtca	acaagcttgt	acaaaggacg	cactgaaaat	180
gaaggatttt	tactgcagct	tatgttaagg	tttattttat	ataaacgatg	ggaaactggg	240
aagaagcaac	gccaaactaag	cctgctgcca	aaccatcttc	ctcctcccag	gagacaccca	300
caacacctgt	ttatccagat	tgggcagctg	ctttccaggc	atattatggt	cagggtgcta	360
ccccacctcc	tctgtccttt	tttgcttcaa	cagtgggatc	tgaccaactc	ccacatccat	420

acatgtgggg tggacagccg ttgatgccac cttatgggac t 461

<210> 1990
<211> 418
<212> DNA
<213> Pinus radiata

<400> 1990
gtagattcct tgcctatcaa gaggggtgcac aaggtttgtt ttttaagaaca cagacaggca 60
gacagacaga gacgtgatca tggggcgagg gaagattgaa ataaagaaaa tagatgatgt 120
aacgagcaga caagtaactt tctcaaaagc caagatgggg atattcaaga aagccacaga 180
gctgtctgtt ttaatgcgatg cagaggtggc tgttctctatc ttttcaaaaa ccggaaggct 240
ctacgactat gctagtcca ggtgtatgga acgaactatt gagagatatg aaaaatgtac 300
caaagcaatt aattgcccaa catcagatcc cattgtcgag aataagagcc caattcagga 360
aggcattgaa atattgaggg agaaaacttcg tgcattacaa agattgcaaa gaaactctg 418

<210> 1991
<211> 321
<212> DNA
<213> Pinus radiata

<400> 1991
actaaagcag ctataaagag actgcagctc cagataatgg ttgcattcca ggcagttgat 60
acaactctcg cagcaattct gaaattgaga gaagatgaac tctatcctca actcgtggag 120
ctatctaaag ggctaatagca gatgtggagg gccatgtag aatgccacca ggtccaaaat 180
catattgtcc aacaggtgag gcatttgggc aatctggcaa gcgcagaggg cacaagtagt 240
taccatcagc aggcaaccat tcaattggaa gctcaggtga ctgcttggtg tgacagtttt 300
tgtagaatga taacagagcca g 321

<210> 1992
<211> 390
<212> DNA
<213> Pinus radiata

<400> 1992
gagaaaaact aagtcctctc gcagcaagca agccacgcac tccctctcta cgactcgggt 60
ttgggtgtaga aggcagagat ttactttgtt tctgcttgtt tgcgtgtctt cactctcacc 120
ttcagacaac atttgtctga accgcggaac tagctcttga aatattgaaa ccacactaaa 180
tcgcagggga ttgggtgtag tttagcagtg ttacagagcg gttagagctag ggaataatcca 240
tatacaacta catcacaga taccattat cagccatggg cgctccgaag caaaaatgga 300
catcagaaga agaaggtgct ctgcgagcgg cgctggagaa gtatggcgcc ggcaagtggc 360
agaccattct caaggaccca gacttcgct 390

<210> 1993
<211> 476
<212> DNA
<213> Pinus radiata

<400> 1993
gcagtggtca tatggatggg ggatccggag aggaccaaga tgccgcgat caagatcacg 60
atcacgatca cgaatcatgat cagcagcagc agcagacgcg gaggaacgt taccacagac 120
acactgcctg tcaaatctag gagatggaag cgttgtttaa ggagtgctca catcctgat 180
acaaaacaaag gcagcggctc agcattgaat tgggccttaa gcgcggcgag gtgaaattct 240
ggtttcaaaa tcggcgctact cagatgaagg ctcaacagga tcgctcagaa aacgccattc 300
tcggtgcaga gaatgaaaa ctgcgggaagc agaactgtag actccagaaa gcaattaaaa 360
atggctcttg tccaaactcg ggagggctcta catcgtcggg agagatgctc ggaatcgagc 420
aacaccattt ccgtatagag aatacgcgct taaaggagga gcttgatcga gtgtct 476

<210> 1994
<211> 429
<212> DNA

<213> Pinus radiata

<400> 1994

gataaaactga	gtgagcaaaaa	ttactcagaa	agaaggaaga	gcagacaact	tcgcccggag	60
gaatgggttg	caacaagg	caacgacaag	gggaatggga	agggaaaggc	gtccccctga	120
attcctcaag	gcgaagtcta	agaaaaagtc	tctggtcacc	ggatgaagat	atagaactta	180
ccacctatat	catgagaaag	ggcctcatgg	gctgctggaa	ctatatcgcc	aagcaggctg	240
gtctgcagag	atgtggaaag	agttgcaggc	tgagatggat	taactacttg	cgacctggct	300
ttaaacggtg	tgcaatttca	ccccagaag	agcgactgat	aatacagtta	caatccagtc	360
tcggtaacag	gtgggtctcaa	atcgcgggac	atttaccggg	acgcacagac	aatgaggtca	420
agaattact						429

<210> 1995

<211> 321

<212> DNA

<213> Pinus radiata

<400> 1995

agcgctgtct	tgtgaaaatg	gggagatctc	cgtgctgtga	gaaggctcac	accaacaaaag	60
gtgcctggag	ccaacaagaa	gatacccgcc	ttgtcgccca	cattcgagcc	cattgggcaag	120
cgcgctggag	ctcgcttccc	aaggcagcag	gactgctgcg	ctgtgggaaag	agttgcaggc	180
agcgatggat	aaactacctg	catccagatc	tgaagcggag	taacttttca	gaggaagaag	240
atgaactcat	cgtcagactc	cattcgctcc	tgggaaacaa	gtggtctctt	attcggggga	300
gattgcccgg	gaggacagac	a				321

<210> 1996

<211> 402

<212> DNA

<213> Pinus radiata

<400> 1996

ccgcctccta	cccgggcgca	ccgacaacgc	tatcaagaac	cactggaact	cgactctgcg	60
acgtcgctat	catggcgaga	aagaccagag	caacgggcta	gctgtgaact	tgagctcgcc	120
agctgaggac	aaagaaacga	tgaactccat	gacacctgtc	acagccacgg	caacgggcaac	180
ggcaacggca	atgccagtgg	ctttagtgtt	ccccacggct	gcagacaacg	tcaggaagcg	240
gagcaacagt	agctgcagcy	ctaatagcaa	tccaggagat	gcccaggctg	aatctgttag	300
gcttaagagg	ctcaattttt	ctgaatcccc	atctagtctt	gaaaatatta	ataataataa	360
caataatgaa	gaagctgtta	gtggccattg	caattcgccc	gc		402

<210> 1997

<211> 375

<212> DNA

<213> Pinus radiata

<400> 1997

ttagcttgca	gaaaatgagg	tgcaaaaacag	ggcaggcaca	agggctattg	gaagttgaag	60
gcactcacc	tgctcctccc	aaaccaaagt	taagaaaagg	tctctggtea	cctgttgaag	120
ataaccagct	cacaaactat	atcctgagaa	gaggctcgtg	cggtgctggt	aactatgtgg	180
ccaagcaggc	tggtctgcga	agaacgggaa	aaagttgtag	gctgagatgg	atataactact	240
tacgcccctg	ccttaaaagt	catccaattt	caagcccaaga	agagcagctc	atcataagaat	300
tacaatccat	tctcggtaac	aggtgggtctc	aaattcgccg	acagttgccc	ggagcgcagg	360
acattgagat	caaga					375

<210> 1998

<211> 466

<212> DNA

<213> Pinus radiata

<400> 1998

acaacagctt	gaatctagtc	gaataaagct	gaaacaaatt	gaacaagagc	ttgagcgagt	60
gaagcaacag	ggaatttcca	tcaatggaca	tttgggcgat	cataatggat	caggggctgc	120

tgcatttgat	atggaatatg	gccgttgggt	tgaagaacaa	aacagacaag	cccgtgagct	180
cagggcttct	ttacaagcac	acctgacaga	tagcgaactt	tgtgttctgg	tggataatgc	240
tatagctcat	tatgatgaac	tcttctgtat	gaagggtgct	gcttccaagt	tggatgtttt	300
ccatcttatg	tcaggcatgt	ggaaaaatcc	tactgagcgt	tggttttatgt	ggatggggagg	360
tttctggcca	tcagagcttc	tgaagattct	tactccacaa	attgagcctt	taacagaa	420
gcaatcattc	gcagtatcta	gcttgaact	gtcatcacag	caggca		466

<210> 1999

<211> 243

<212> DNA

<213> Pinus radiata

<400> 1999

ctgagagtta	agtgtattgt	gggaggga	agagaaaaa	gaggagatca	agaatggtga	60
ggggaaaaat	ccagatgaag	aggattgaga	atacggccag	caggcaggtt	acattttcca	120
agcgtagaaa	tggattgtctg	aagaaagcct	acgagctctc	ggttctctgc	gatgcagaag	180
ttggacttat	gattttctcg	ccaggaggaa	agctctatga	attcgccaat	accagcatgg	240
aga						243

<210> 2000

<211> 642

<212> DNA

<213> Pinus radiata

<400> 2000

cgagcgcgaa	agactgaaat	attgggtgact	gaaatagagc	aacttcaaa	aaaggaatgg	60
atattaaagc	aggagaatgc	tttctctggc	aaaaagttcg	tgcattcctca	ttccgtttcg	120
aaaactcctg	gaagtgaatc	gggaagcatc	caaaacagtg	aagtgcagac	gcaactgggt	180
atgagaccgc	catgtacaaa	tgctcatttt	cttattaata	gttctcattg	ataatcaatg	240
tattctgtaac	tgtgttatac	atttattatg	aaaattttat	attaataaaa	ggtaaaagctg	300
cttctcataat	cgcacctaat	tggtcaccac	gtccaaaaaa	aggctcttgc	caagtgaact	360
aaatgttttt	tgaaccgaag	tctgtcttcc	aaactcagta	tgttaagctt	ctatgaatac	420
atacttataa	ggtttttgat	tagcattacg	agcggagttt	tctctattca	tccgatgaagc	480
atgaagagtg	aggagataaa	tattgacgca	tgtggagaat	ttaatgttgc	atatactcct	540
acgtgtatat	atgtgatgtt	ttatatatat	atatatatat	ataataatc	gattttgaatc	600
tataaaattt	taaaatttat	atttagttta	aaaaaaaaaa	aa		642

<210> 2001

<211> 485

<212> DNA

<213> Eucalyptus grandis

<400> 2001

gagagagtct	gcaaaactgcg	cgtcccgctg	cgccgagcgc	cgaggagaatc	gcgccggcgg	60
agatatgggg	aaccagaaagc	tgaagtggac	gaaggaggag	gaggaggcgc	tcttcgcccgg	120
aatcgccaag	cacggcgccg	gcaagtggaa	gaacatcctc	aaggaccgcc	aattcgcccc	180
cgccctcgct	aatcgctcca	acatcgacct	caaggacaag	tggcgtaact	tggcgctcgg	240
tacttctgga	caaggttcta	gagataaaca	aaggctgtca	aaagtgaaaa	gtctgatggc	300
cgctcctcag	tccagtaaccg	tgccctctaaa	tccacaagct	catgctgcac	ctactgatgt	360
tgcattggctc	aattcttcaa	atagctttca	agatggcaca	aatatttcac	tgtgggtatc	420
tgctgctcct	ttccttttca	gtaacggcaa	tcttttttac	ttctatcctt	tgttatecct	480
tctgt						485

<210> 2002

<211> 356

<212> DNA

<213> Eucalyptus grandis

<400> 2002

cgactcgca	gtcagctcgt	gcactccttg	caattcatga	ttattttctc	cgacttcggg	60
cccttagttc	cctctggctt	gcccgctcaa	gagaatgaag	aggctcatgg	tccgcaggc	120

tgacatgtac	atttggtgatc	tttaggaagc	tatcagtttt	gaagtagttt	cggacccaga	180
actggtttat	ttctagtttt	cttcattttt	ttttttcttt	gctataaata	ttttttcttt	240
cttagacacg	aagtcacaga	gaattgattg	atggatgct	aagctatcat	aggttgggag	300
tgcattgttc	tcaattgaaga	tactgcta	tgtgtaggca	ctctctgtca	ttagtc	356

<210> 2003
 <211> 713
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2003						
tctccatcca	aattcccacc	ttcctccctt	ctcccttttc	cccctttctc	tctctctgca	60
ccgaaggaga	cccccgctg	gcaagccacc	tctcggtaaa	gttcgctctc	ttttgggtcg	120
gcgaatcttg	ggctcgatga	tggcttcgag	gaaggaggtg	gatcggatca	agggaccgtg	180
gagccccagc	gaggacgagg	ccctccgcct	cctgggtcag	aagcacggcc	ccccgaactg	240
gtccctcatc	agcaagctca	tcctccggcg	gtcggcgcaag	tctgtccgcc	tccggtggtg	300
caaccacgct	tcctcccgagg	tggagcacgc	ggccttcacc	ccggaggagg	acgacatcat	360
cgtccgcgcc	cacgcccggg	tgggcaacaa	gtggggcacc	atcgcccgcc	tcctctccgg	420
gcgcacccag	aatgcatcat	agaaccactg	gaactccacc	ctcaagcgca	agtgctcccc	480
cccgctctcc	ccgctccgcg	aggaaggga	caacaggggc	ttcgacgctg	ccgcggggta	540
cgacggggag	ttgagccccc	gggagcgccc	ggcgaagcgg	tcggcctccg	ccgggcccgt	600
cctgagcccc	ggcagcccg	ccggatccgg	catgagcgac	tcacgctgct	acttcgtgta	660
ccggcccgct	gcgaagaccg	gccccgtggt	gcccccgacg	gtcgaggcga	cgg	713

<210> 2004
 <211> 341
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2004						
acaggttgct	caattaaagag	ttgagaattc	tactttactg	aaacgtctct	cggacataag	60
ccagaagtac	aattgtagcag	ctgttgacaa	cagagttttg	aaagctgatg	tgcgaacctt	120
gagagcaatg	gtgaagagac	ctgaagagac	gggttaaaaga	gtaacccgag	tgaaaccaat	180
gtgcatatg	atgtccgaca	tgtcttctgt	gggtgtgcca	ccatttgatg	gtatgctctc	240
tgatcatcat	cgggatgctg	cagttccctg	gcgagatgac	ccaaagcacc	aattctatca	300
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<210> 2005
 <211> 1403
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2005						
tttctttctc	accctctgtg	catgaatttt	cttggggcct	gtctatgcat	tctctctctc	60
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aagaaaaact	ttttgtctct	tcgagtgtca	tgaactcgca	ctgaaagtgc	gcgcggaacc	300
gagaagagca	agaagaagaa	gaagaagaag	aaagagaaac	catccccctt	gaaaacgcga	360
aaaagagtaa	atagtaaaaa	gagcaagctt	gatcttactt	gatctaaaaa	atataagatc	420
ttctctgttc	gagagaagtc	acagtccgcg	tttttccaga	catgaagaga	cttggcagct	480
cagattcggt	gggtgctttg	atgtccatct	gccacccttc	agaggaaattg	cagcacagtc	540
cgagaacaag	caaccacatc	taccacagca	gggacctgca	gtccatgctg	gagctggggc	600
tcgacgagga	aggctgcgtg	gaggaccagt	ccgcccggcg	cgggggggc	gtcgccggcg	660
agaagaagcg	ggcgctgagc	atcgaccagg	tcaaggccct	ggagaagaac	ttcgagggtg	720
agaaacagct	cgagccggag	cgaaggtgga	agctggccca	ggagctgggg	ctcgaccgcg	780
gccaggtggc	cgtgtggttc	cagaaccgcc	gcgcgcgggt	gaagacgaag	cagctggagc	840
gggactacgg	cgtgtcaag	tccagctacg	agggcgtcaa	gctcagctac	gcagccctca	900
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aagacgacaa	ccccgagacg	aatctctcgc	tcaaaagaaga	ggtcatcatc	cccgggccag	1020
acgtgtcgga	caagatccgg	gcccgacagc	acggtgacga	cgacacacaa	cgctctctct	1080

ccctccgat	caccgccccg	cctcgcgagc	tgagcttcaa	caatggtggg	ctgaaggagc	1140
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gcagcccgaa	ccccgcgcgc	cagagccacg	gcggcttctt	gaaattcatg	gggtcatcgt	1260
cctctctggc	ctccccacgc	cgtcgcgcac	cggcttctct	cggcggtgtg	tctcagctcc	1320
agttccagcg	agcgtaccag	cctcagcctc	agcctctctc	tcaccaccac	caccacagtc	1380
cgtcgtgaa	gatcgaggag	cac				1403

<210> 2006

<211> 283

<212> DNA

<213> *Eucalyptus grandis*

<400> 2006

gagaggtaca	agagtgcacg	cagtgtattc	tcacatccac	agtcctgttc	tgacgtgaac	60
actcagtttt	atcagcaaga	agcatccaag	cttcggagac	agataagaga	aatccagggtc	120
tcagataggc	atcttctagg	tgagggtata	agtgtattga	gcttcaagga	tctcaagaat	180
ctcgagagca	aattagagaa	atcgatcagc	cgtgttagat	caaagaagaa	tgagatgctt	240
tttgccgaga	ttgagtacat	gcagaagagg	ggccttgtgc	agg		283

<210> 2007

<211> 252

<212> DNA

<213> *Eucalyptus grandis*

<400> 2007

agagaacaag	ataaacaggc	aggtgacctt	cgctaagagg	aggaatgggc	tgctcaagaa	60
ggcctatgag	ctctctgtcc	tctgcgatgc	tgagggtcgcc	ctcattatct	tctccaccgc	120
cggcaagctc	tatgagttct	gcagcagccc	tagcatgctc	aaaacgctcg	accgttaccga	180
aaagtgcagc	tatggatccg	ttgaagttaa	caaaccctcc	aaagaactag	agaatgccta	240
cgggagtagc	tt					252

<210> 2008

<211> 386

<212> DNA

<213> *Eucalyptus grandis*

<400> 2008

tctagatcca	ccaccagcag	aaggaggtag	aagggggaga	aggaggagaa	ggaggaggag	60
atgggtagag	ggaagataga	gatacagaag	atagagaacg	acacgaacag	gcaagtgaac	120
tactcgaagc	ggagggaatg	catcttcaag	aaagcccaag	agctcacctg	cctctgcgac	180
gctagggttt	ccatctctat	gctctccggc	aacaagaagc	tcacagagta	catcagcccc	240
accaccacga	caaaaaggat	gattgatgat	taccagaagg	ctcttgggat	cgatctgtgg	300
actcacacact	acgtatagaat	gcaagaggag	ttgaggaaac	tgaaggaggt	taataacaat	360
tttcggaagg	aaataaggca	gatatt				386

<210> 2009

<211> 123

<212> DNA

<213> *Eucalyptus grandis*

<400> 2009

gagaaacctt	atgggggaag	atttggggac	cttgaactcg	aaggagctcg	agcagctcga	60
acgtcaactt	gaggcatcat	tgaagcatat	taggtcaact	aagactcagt	gcagctcctga	120
tca						123

<210> 2010

<211> 581

<212> DNA

<213> *Eucalyptus grandis*

<400> 2010

cttagggcta	gcttgcctac	atcttcacca	tcttctgcgt	agtttcaaca	tttttagagt	60
gaagaaaagg	agaaaaaact	aggcaaaact	gcgaccatgg	tttttccaac	ccaagccacg	120
cccaggaggt	ccccgcagag	gaaaatgggg	aggggaaaga	tcgagatcaa	gcggatcgag	180
aacacgacga	atcggcaagt	gactttctgc	aagcggcgga	atggcctcct	caagaaggca	240
tatgaactct	cggttctttg	cgaagcccgag	gtcgccctca	tcgtctcttc	cagcgcggcg	300
cgccctcatg	agtatgcgca	cgatagtgtc	aaagcaacca	tcgagaggta	caagaagggt	360
tgctcagatg	cctccagtag	cggatccgtt	tctgaagcta	atgttcagtt	tatcacgcaa	420
gaatccgcca	agttgcaaca	acagattaat	aacatgcaga	acaataacag	gcaactgggt	480
ggtagctcaa	ttgctgggag	gaatatgaag	gatatgaaga	tcgcggagca	aaaactagaa	540
aaagcaatcg	ctaaaaattcg	cgccaaaaag	aatgcgattt	t		581

<210> 2011

<211> 538

<212> DNA

<213> *Eucalyptus grandis*

<400> 2011

tcagcacaaag	gaacaaaatgc	tggttgaagc	taacagagaa	ttaaggaaga	agctggaaga	60
gagcaataca	agaattccctc	tccgccttgg	atgggaagct	gaggatcaca	atacaatttc	120
atacagccgc	cttcccatgc	agtcgcaagg	attgatcttc	cagcccttag	gcggcaaccg	180
gacattgcag	atcgggtata	atcctgcagg	ctcgaatgaa	tgaatgtttt	cggtctcgca	240
ccaaacatccc	aacgggattc	ttcccggatg	gatgctctga	actgtccgcg	aagtgaactg	300
cttgctggaa	gttccatattc	aagtacattt	tccagttttt	gctatgatat	atgactcttc	360
ttcttctgga	tgaacctatac	gaagatccat	cattctcgga	tattgtccat	ggacgtaccc	420
taaaagggaag	gacagtatga	atccaatcta	gcttactatt	ttgtataaga	ataaacatct	480
gtgctgtgga	tatttggaa	tcattctatgt	tatttaataga	aaaaaaaaaa	aaaaaaaaaa	538

<210> 2012

<211> 341

<212> DNA

<213> *Eucalyptus grandis*

<400> 2012

aggcagcaaaa	gagctcgagt	ccttggaaag	acagctagat	gggtcattga	agcagatcag	60
atcacgaaga	actcagtaga	tggttagataa	gctgactgat	cttcaacatc	gggaacagtt	120
gctccacgaa	gcaaacaggga	ccttgaatca	acggttgatg	gaaggatacc	aagtgaatgc	180
gctccagttta	aatacaacatg	ccgaggaagt	cggaggatac	ggatcatcac	cgccgcgcgc	240
actgcctcaa	cagccacttg	ctcagctcca	cagcgaagct	tttttcaatc	ccttggaatg	300
tgaaccact	ttgcaaatgg	gataccagcc	cgatccagt	t		341

<210> 2013

<211> 934

<212> DNA

<213> *Eucalyptus grandis*

<400> 2013

gcgcacatgac	gcggcgcatgc	tcccactgct	gcaacaagg	ccacaactcc	aggacctgcc	60
ccgtcccgcg	cgccggcggg	gacggcgggg	gcgcggcgcg	cgcccccctc	tctctctccc	120
ctctccacttc	ctctctctggc	gcgcggcgcg	cgccggcgcg	ctcgccctcc	ggcgccgggg	180
tgaagctgtt	cggggttagt	ttaacggagc	ggtcgatcat	gaagaagagc	ccagcgctgg	240
gggtcctgtc	cgccggccac	taccactcct	cgtcctccgc	ccggcgcatcc	cgcaaccccg	300
gctcgtccccc	gatacgacggg	agcgagcgct	acctgtccga	cgatcccgcg	ccgggctccc	360
gctcgtcccaa	tcggcgcgctc	gagaggaaga	aaggtaaacc	atggacggag	gaagagcatc	420
gaaggttttt	aattggtctc	cagaaattgg	gtaaaaggaga	ctggcgaggg	atagctcgtg	480
actttgtgac	tacaaggagt	cctactcaag	tggcaagcca	tgccacaga	tattataacc	540
ggcagagttaa	tgctggcgga	agaaaaggagc	gctccagcct	ttttgacatg	gctccagata	600
tggctactgc	tgaccaaccc	tcacatccag	aagaaacatt	tctgcctcct	tgtgtcagac	660
ttaacgatga	tactaaactca	acaacttcaa	ccagtatggg	actcgatttg	gaagaagcgc	720
ctatggagac	ctcgaccacca	gaaacatctg	aagggggcgg	tgatgttgcg	atggaatcaa	780
ttgatcaagt	acctcttgta	cctgtttact	tccatacta	ttaccacta	cccttcccca	840
tgtggccgcc	caacatggcg	cctcctgaag	atggaaagggt	ggtggagaca	tctcatcacc	900

gtgtgctaaa gccaatccca gtaattccaa aaga 934

<210> 2014
<211> 372
<212> DNA
<213> *Eucalyptus grandis*

<400> 2014
ctgggacact tcttctccce ctctactctt acttgaatcg gtcgacaatt ttatctgtgc 60
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ggatgcttta gttcacgagt cgaagactat gagcagtgc aaaaataatt cacctgaaaa 180
aagtcacaaat tcatctgctc tgacacctgg tgatataagc agttccactt tggatatattg 240
caagtctgaa tgggaagagt atggtgacc ctttctcca ccgggccatt ctgcaacttc 300
agttttcaat ggtgtgactc ctttgagcac tagtggaagc tcactggatg aacaaccgta 360
tcccataacc tt 372

<210> 2015
<211> 411
<212> DNA
<213> *Eucalyptus grandis*

<400> 2015
gcacataaga aggaagctct tgaaccgagg gatcgatccg gcgacgcacc ggccattgaa 60
tgagcccgcc caagacgcaa ccactatttc gttcgcagcg gctccgtcaa aacaagaacc 120
gcgagacgag gccatcgccg ccgcgctcgg ctacaagaac gagaacaacc cgacaacaac 180
ggcagcaacg gttcaagaaa agtgctccga cttaaatctt gagctcagaa taagccctcc 240
ttgccagcag cagcatcagc ctgatcgctc gatgggaatg gttgagggaa atcactgctt 300
tgcttgacgc ctggggttgc agaaccagcaa ggagtgcagt tgcaggagag gagcgagcgg 360
gggaagcagc gcccatggcg gctacgactt tttggggttg aagacgagcc g 411

<210> 2016
<211> 356
<212> DNA
<213> *Eucalyptus grandis*

<400> 2016
ctcgtcccca aggttttttt gcggaagtat ggagtcccg agtgaatttt cagaggcctc 60
ttcacagaag agaatcgggg ggagagggaa aatagagatc aaacggatcg agaacacgac 120
gaaccgagcag gtcacctttt gtaaacgccg gaaccgggttg ttgaagaagg cttatgagct 180
atcgggtttt tgcgatgctc aagtggcgct tattgtcttc tcgagccctg gcaggctcta 240
tgaatatgct aacaacagtg tcagaggaac aattgagagg tacaagaagg caagcagtgga 300
ttctccaca tccacagtc cgtttctga agtggaaac tccagtttta tccagc 356

<210> 2017
<211> 356
<212> DNA
<213> *Eucalyptus grandis*

<400> 2017
agagagtaat ggggagaggg agagtggagc tgaagaggat agagaacaag atcaacaggc 60
aggtgacctt ctcaagaggg aggaatgggc tgttgaagaa ggcctatgag ctctctgtgc 120
tgtgtgactg tgagggtcgc ctctctatct tctccagccg tggcaagctc tatgagtttg 180
gcaggcgtcg ccctctcgcc ataaataaga cgcttgaacg ataccaacgt gacaacttca 240
ctctcaaga caacgctgct gaacatgaga cacaacagaa ctgggttcaa gagatatcaa 300
aattgaaggc aaaatatgaa ctcttcaaca aactccagaa gcattttgctt ggaana 356

<210> 2018
<211> 495
<212> DNA
<213> *Eucalyptus grandis*

<400> 2018
 caaggaagca acagtctttgc tgcaaccaga agctagtcca aactagtggg aggttgtggg 60
 cgcttccagt gctttgttaa gccaccacaa gaaagcaaaa accatcgttg cctaccacca 120
 aagttcgag cgcttcgtga cgagaggagt ctgttgatt atccaagtgt tgtttaaagt 180
 agatctcctt ttctcggtgaa catggctcgt ggaagagtc agatgaagcg gatcgagaac 240
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 gagctctccg ttctctgtga cgctgacatc ggctctctca ttctctcccc ccacggccaag 360
 ctctatgagc tggccaccac aggaaccatg aaggggctga tcgagaggta catgaagacc 420
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 gaagagatta acata 495

<210> 2019
 <211> 613
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2019
 aaaaagagag acagagatat ggggaagagg aaagttagag tgaagaggat agagaacaaa 60
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 tatggttccac ttgagaccaa ctgctccatc aatgagatgc agaacagcta ccaggattat 300
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 gatttgggtc ccttaaacct gaaggagctg gagcaacttg agcaccaggt ggagaattct 420
 ctgaagcaaa ttctgtctgc aaagacccaa tcatgtttg atcaactggc tcatcttcag 480
 cacaaggaa aaatgctcgt tgaagctaac agagaattaa ggaagaagct ggaagagagc 540
 aatcaagaa tccctctccg ccttgatgg gaagctgagg atcacaataa catttcatac 600
 agccgccttc ccc 613

<210> 2020
 <211> 564
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2020
 atcccccttc cttgttcaac ttctctcttc tccccctct tctactgcga atatcatatc 60
 cgaagctttg gcttcgacga cgaggctcac ggaatttaga gaaccatgag gaagccttgc 120
 tgcgacaagc gggacaccaa caagggggcg tgggtccaagc aagaggacca gaagctcatc 180
 gattacattc aaaagcagcg cgagggtagc tggcgaaact ttctcaagc cgccggtctg 240
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 aaccggtggg cgcttatagc tggaaaggtg ccgggacgta cagataacga agtcaagaac 420
 tatttgaatt ctacctaag gaggaaactc cttaagatgg ggattgacct caacaatcac 480
 cgggttgaacc aaatctccc tgcctctcaa acccgatgc ctgcggcagc attcctcatc 540
 cagtatgaag accacatgac cctg 564

<210> 2021
 <211> 410
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2021
 tgaagctct cgacaaactc ctctgggaca cactttcttc gaccacactg agtccactg 60
 gttcaggcaa cgttcgacaa tacatgggcc aaatggctat tgcgatggga aagttggcca 120
 ctctcgaaaa ctctgttcc caggctgacc tcttgagaca gcacagctc gcacagatg 180
 atcgatatc aaccaccac caagcagccc gogctctct cgtcatcaat gactacatct 240
 cagctctccg agctctaagt tcattatggt tagctcgtcc taggactgaa aacatcgtt 300
 ctgctaaact ctctgatgt aatcgatagt ttgtattgaa attaacgttt ctagtgggga 360
 tccatttact gcgactgtag cgattcggcg cacatttata taaaagctat 410

<210> 2022

<211> 328
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2022
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 ttttagtcctc ttaccctctg tgtttgatgt gaatatgttc cgatgtctct gatgtttcta 180
 ctctatctctg ttggcagtggt taaaatgtca gttcgtgttc tgttgactgg attggctctc 240
 ttttttgtac aagggggtgt cgtttttcac cctcattagc ttgtgaaatt tgcgatgatga 300
 tgaatgggtg taacaaacct atatttagc 328

<210> 2023
 <211> 380
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2023
 ccaacaagtc atatatcttc gacttgctcc cagtggaaac ccttcatta ctaaatcgct 60
 gctagcgcta aacccccctc actcttcacc agcaaaaacg cctttctctg cacacaaatg 120
 gctgctcgta aaattgaaat acagccaata acgcacgagc gaaacccgac tgtcacattc 180
 ctcaagcgca agaacgggct gttcaagaaa gcgtatgagc tcggtgtgct ctgctctgtc 240
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 tgctctcgcg gtatccaggga tattgtgcag aggcattctc atcacgacgg cgagactgat 360
 aacgctgggc ctgggggactt 380

<210> 2024
 <211> 322
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2024
 cgagacagaa ccttcttgggt ggggcttgag aagcttggga aggggtgattg gagaggcatc 60
 tctaggagct atgtgaccac aagaacacgg gccacgggtg caagtcatgc tcagaaatat 120
 ttctctcggc aagtgcgctt caacaagaaa aagcggcgct cgagcctctt tgacatggta 180
 aaaaatcagt gctcctataa actattacca tcatatcggc tatcatcaat tagtttgatg 240
 ggggttgata aattcttatt gtataagggt gatgtcaaaa ccgcgccggg tgatcggtta 300
 ggcagtttga cggccaagcg ga 322

<210> 2025
 <211> 387
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2025
 gaaagaaggg agtagagaag gaggtgacat aaatttgcca cagaggcaac ggaactttggg 60
 agagatgaca ttggaggagt tctagttagg agcggcggtt gtgaggagg agacacaaat 120
 gatggcaagg cctggcgaca atggagtcca tgaagaaatg tcacaattca ctagttaagg 180
 tctcgcagat agtgcggctg ctggaacaga ttctatattc tctagtaagc ctgctgggtc 240
 atcgttagat ttatttgaa ctagacctac tcagctacag caacaaccac agccacagcc 300
 gcttgaaaca ccggctccgc tttttccaaa gccggaaact gtgtcatttg caacctccgt 360
 gcatctacca aatacagctt catatag 387

<210> 2026
 <211> 450
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2026
 gcgaatgctc ctctccggat tgcctgaac tccaacgctt cctccaaccc ccagtcgatg 60
 gccacctcca cgacgtccgc gaccacggcg gccggggggc gcgacggcgg caagaaggctc 120

aggaagccct	acacgatcac	caagtccagg	gagagctgga	ccgaggagga	gcacgacaa	180
ttctcgagg	ccttcagct	gtttgaccgc	gattggaaga	aaattgagga	ttttgtgggc	240
tcaaaagactg	tcattcagat	ccgaagccat	gcccgaaat	acttcttgaa	agtcacaaa	300
aatggggcag	ttgcacatgt	tcacacctct	cgtcctaaac	gcaaagctgc	tcatccctac	360
cctcaaaagg	catcgaaaa	tgtttttagtg	ccgctgcaag	catccatggc	ccagccttct	420
tcaacaaatc	ctgctttttac	aattacacct				450

<210> 2027

<211> 786

<212> DNA

<213> *Eucalyptus grandis*

<400> 2027

ccaaacatcc	atccgtccat	cagctctaaa	ctttaattgt	aatcacatcg	tcctttctcg	60
acaccaactg	gggtcaaatgc	ttaaaaaaag	gaaaaggaaa	agagaaagat	gagcttttct	120
tccttctctt	ccaccaccgc	tctcttctat	ttatctctct	tcctctcttc	ttcctccatg	180
agcgggtgctc	ttcagggttg	atgcaccact	tcaactcaac	ctcaatacat	aaacgtctg	240
ttgggaaaaa	gataaaaggca	gggagaaggga	gatggggagg	tcaccggtgt	gcgagagcga	300
gcacatgaac	aaaggggcac	ggagcaaggga	ggaggacgag	cgctctcatcg	cctacatcaa	360
gcgcaccagg	gaaggtctgct	ggcgatccct	tccaaaagca	gcggcctctg	tgccgtcgcg	420
caagagactc	cgcttgagtg	ggatcaacta	cttgaggcca	gatttgaagc	gtgttaactt	480
ctccgcagaa	gaagacgagc	tcattatcac	cctccacagc	ctctcgcca	acaaagtggt	540
gctgatagcg	gcacgggtgc	cggggaaggac	agacaacgag	attaagaact	actggaacac	600
ccacatcaag	agaaaagctc	acgcacggcg	gatgatccc	caaaacccac	gtctctctcg	660
actacaccag	cactgctggg	gctgggtgctg	ctgccacttc	acactatctg	ttctaaagct	720
aacaacacgc	gcaacaaggc	cacgcctcac	tcgacgactt	gtgaagaatt	atcatcatca	780
tcaaca						786

<210> 2028

<211> 476

<212> DNA

<213> *Eucalyptus grandis*

<400> 2028

agaagcgctg	agttcttggg	caaagctctag	cagtttcggg	ttctccatca	atcgagtcgg	60
agtgggagaa	aatgagcaca	aatgggttgc	tgaagtttga	ccaaagtctt	tagtgagatg	120
gttgctgtct	ccogttctcc	tccaacaga	tgctgatca	aataacttac	ttgaccgcca	180
gtatgaactc	tcctttagct	cagcttggtt	acccaagaag	gatgcacacc	tacgagccat	240
ttgaccagtt	ccccatgtgg	ggagacacct	tcaaaagctga	caaggtcaaa	aatctcgagg	300
catcgctatc	tgatgatcgt	catgcagtag	atgatggatt	ggacaagaag	tttgaatatg	360
tttctcatga	atcggcgaaa	aattccagct	ccaggagcga	tcaagaagca	aatagacctg	420
acaaggtaca	gagacgtcta	gcacagaacc	gtgaagctgc	tcgaaaaagc	cgtctg	476

<210> 2029

<211> 535

<212> DNA

<213> *Eucalyptus grandis*

<400> 2029

cagccggatg	taccttagtg	tactgaatag	cctaaagcca	tggttctatc	agatgttaac	60
ttgcataatg	aaatgaatat	tacaacatgc	gcgctttctt	gagttttttt	tcctctctga	120
gttgccacgc	agaagacgct	gagttcttgg	tcaaaagtcta	gcagtttctg	ggctctccatc	180
aatcgagtcg	gagtgaggag	tatgaactct	ccttttagccc	actgtgttaa	cccaagaagg	240
atgcacacct	acgagccatt	tgaccagttc	cccatgtggg	gagacacact	caaaagctgac	300
aaaggtaaaa	atcttgaggc	atcgatcatc	gtgattgtgc	atgcagtaga	tgatggattg	360
gacaagaagt	ttgaatatgt	ttctcatgaa	tcggcagaaa	atccagctc	caggagcgat	420
caagaagcaa	atagacctga	caaggtacag	agacgtctag	cacagaaccc	tgaagctgct	480
cgaaaaagcc	gtctcgcgaa	gaagaaatat	gtacaacaac	tagaatcaag	ccgct	535

<210> 2030

<211> 723

<212> DNA

<213> *Eucalyptus grandis*

<400> 2030

gtgaggcgct	gctccaccca	ccaccgcgct	ccccaccgcc	gcgcgcgcca	ccaccaccac	60
caccaccacc	accacccttat	actgtacaaa	taatcccttg	gcctcggccg	ttatagccctc	120
ttactcaaaa	atcagttttt	acccttttct	gttcgtagt	cgtagttttg	ggccagggtg	180
tctattcggt	atatgtagag	aagtcagtg	gcgaaaccga	gcgtcgagcg	gtccgcatg	240
gcttctctt	cttctgtagc	ttccgcgagg	aaggacgcgg	atcgatcaa	ggggccgtgg	300
agcccgaggg	aggagcaggc	gctgcagagg	ctggtccaga	gctacggccc	ccgcacactgg	360
tcctgtatca	ccaagtccat	cccgggcgcg	tcgggcaagt	cgtgccggt	ccggtggtgc	420
aaccagctct	cgccccaggt	ggagcaccgc	cccttcaccc	cggaggaggga	cggagccatc	480
gtccgcgccc	acgcccaggt	gggcaacaag	tgggccacca	tgcgtcgct	cctcaacggc	540
cgaccgaca	acgcggtcaa	gaaccactgg	aactccaccc	tcaagcggaa	gtgcctctcc	600
acgtgctcgg	cggcgcgcca	cgacgccgac	gccctcgcg	agcagcagcc	gctcaagcgg	660
tcggccagcc	tcgggacgcc	cacgggcggc	aacaacgcgg	tctccgatct	gttcttcagc	720
cgc						723

<210> 2031

<211> 412

<212> DNA

<213> *Eucalyptus grandis*

<400> 2031

gctctctctc	tctctctctc	tctctctctc	tctctctctg	gtggctttct	tctgtttttg	60
gctgtgtatc	gacaaacaaa	aaccatctgg	ttcggcgctc	gaacaagaaa	aaatttgaga	120
agggtattcaa	ggaagatggc	gaaagagaag	ataaagataa	agaagataga	caacttgacg	180
cgaggggcagg	tgacattctc	gaagaggaga	agagggctga	tcaagaaggc	cgaggagctc	240
tcggttctgt	gtgatgctgc	cgtgtccctc	atcgtctctc	cagccactgg	caagctctat	300
gatttctcca	gctccaggca	gatgaaggga	gaggatctgg	aggggttaaa	cgtggaggaa	360
ttggaccaat	tagagaagaa	atcgaggcgg	ggactgagcc	tcgtgatcaa	ga	412

<210> 2032

<211> 495

<212> DNA

<213> *Eucalyptus grandis*

<400> 2032

gagttaccac	cacccttttg	ttttattttc	gatcctgcat	ctctcaaaat	gaggaaacct	60
gatgcctctg	ggaagaacag	ctccaacagc	aacgctaaca	agctgagaaa	aggactctgg	120
tcgctgtaag	aggagacaaa	gttgatgaac	tacatgtcca	acaatggcca	aggctgctgg	180
agcgaatggtg	ccgggaacgc	cgggctgcag	cgggtggcca	agagtgcgc	cctccggtgg	240
atcaactact	tgcggcccca	ctcacaagag	ggcgctttct	ccccacaaga	ggagagagctg	300
atcatccact	tgcattccat	ctttggcaac	agggtggtgc	aaatcgcgcc	tccgttgccg	360
ggacggagctg	acaacgaaat	aaagaacttt	tggaaactga	ccataaagaa	gaaggtcaaga	420
actcgtcatc	atctctctgt	agacactcgg	caaacacgag	cgattctcct	tgtcatcaga	480
cgttaaagat	gtatg					495

<210> 2033

<211> 220

<212> DNA

<213> *Eucalyptus grandis*

<400> 2033

gcccccgaga	tcgcgcgcgc	gctcgcggcc	cctcgcggcg	ggcaccaccg	gcgggcgcac	60
tcgaggtgca	atttcgggat	ccggaggagc	ctggatctgg	ggccggatcc	gttcgagaac	120
gggcccctcg	ggagcttcga	ggacttcgga	tcggagagat	atctactcag	caactacatg	180
gacatcagga	aattcggatc	aagctcgacg	cgggcagggg			220

<210> 2034

<211> 445

<212> DNA

<213> *Eucalyptus grandis*

<400> 2034

cttctgagaa	tgtgtccggt	ggagccatcg	aacgtcccag	agccacggga	aaattggctg	60
cgctgtgaaa	ctcgcgccagc	atgtctcat	cattggacct	gaagaattct	tgcattggatg	120
caaatgccaa	ccctgtgagc	attttgcaac	ctggtgtagt	gccacctgaa	gcttggttac	180
aggtaattgtc	actctgtggt	aggtaactta	aaatatttcc	ctggaaggcc	agtactctctg	240
ttctttctgc	tgtttcttca	agttgctctc	tacaatatca	tgcactttgt	ttctcaaaat	300
tcgctttgtg	taagaatgaa	agagaactga	aaagggagag	gaggaacacg	tcgaacctg	360
aatctgctag	aagatcaaga	ctgaggaagc	aggctgagac	tgaagaactt	ggcaaaaagg	420
tggattctct	gagtgccgag	aatag				445

<210> 2035

<211> 349

<212> DNA

<213> *Eucalyptus grandis*

<400> 2035

tttttttttt	gtatataatc	tctttatttc	tagtttaggga	aaattcagaa	agaagccgtg	60
aaaggaacttc	atccaatggc	gatggaaaat	ctgaagtga	aggaaggtt	gctggggagg	120
tggatgtgc	ttctgagaat	gtgtccgtg	gagccatcga	acgtcccaga	gccacaggaa	180
aatgtgctgc	gctgtgaaac	tcgccacga	tggcctcatc	attggaacctg	aagaattctt	240
gcattggtgc	aaatgccaac	cctgtgagca	ttttgcaacc	tgggtgtagt	ccacctgaag	300
cctggttaca	gaatgaaaga	gaactgaaaa	gggagaggag	ggaacagtc		349

<210> 2036

<211> 648

<212> DNA

<213> *Eucalyptus grandis*

<400> 2036

gagagagaga	aagccacaga	gagaaagagg	aggatttttg	atgaacgtat	attcattggg	60
agggtgctagt	catggggagg	caaccgtgct	gtgacaaatc	cggggtgaag	aaaggacctg	120
ggacggcgga	ggaggacaag	aagctcatca	acttcatcct	caccaacggc	cactgtgtgt	180
ggcgtgccgt	ccctaagctt	gccggcctcc	gcgcgtgcgg	caagagctgc	cgctcccgct	240
ggaccaacta	cctccgcccc	gaactcaaac	gcccctctct	cagtgaaggct	gaggagcagc	300
tcgtcatcga	cctccatgcc	cgcttcggca	acaggtggtc	gaagatcgcg	gcaaggttgc	360
ccgggagaac	cgacaacgaa	ataaagaacc	attggaacac	ccacatcaag	aagaagctgc	420
tcaagatggg	gatcgatccc	gtgacccacg	agcccttgaa	caagcctcag	aaaactccat	480
ccgaacacga	cccggaagct	ttctgtgtgt	catcgcaagc	ggaccctacg	ttcgaaatgc	540
ccgccaaacac	gcaccaaccc	aacaacgccc	acgcggacga	agtacaactc	gtcctcgctc	600
ttcccgctcg	cctgtccgcg	gagaactggt	gtcccggcag	ggacgagt		648

<210> 2037

<211> 268

<212> DNA

<213> *Pinus radiata*

<400> 2037

ctgagcagaa	atatggatga	cgtattttgt	cagcgctgca	acagaaactt	tacagctcga	60
gatcggttaa	ttcttaaaaga	gagaaggaat	ttcgggtggg	tttgtggcgt	tactgaagag	120
gaagaagaac	ttattatcag	aatgtataag	ctcgtggcca	acaggtggtc	attgattgct	180
ggcgcccttc	ctgtgcgaaa	agctgaagag	attgagagat	attggaagat	gagaagcata	240
aatgtgcac	ctctgaagcc	taatacct				268

<210> 2038

<211> 1055

<212> DNA

<213> *Pinus radiata*

<400> 2038
 ggcgaatcga gctccagctct ctgcccttag gcacacgtac aacatacgtg gctaacagag 60
 ataacaccca aagccctatcc agccatgggt gatggatggg tggacagtga tacaggcagg 120
 agagggttca gctgggaccac agttttggat agaattgggt cttttgcttc ctccgctctt 180
 actaatcttc tgactttggc agtatgtctt ccgtgatata tttaatgtgt atacgttctt 240
 ttggggattg cgagacagca gatccaagtc tgggctgtgg atctggaacg catttttaagc 300
 tctggctctt tcaattgggt ttctggtagc gagctccatc acaatgggtc aagaattggt 360
 gatgatgtgt tccaattggg ggcacagtgg gcacagctcc agagcctgtc ctgatgagg 420
 atctgtcaaa ttgtttgggg tcaggctcat tgctacagac gatggcatgg ctgcatgag 480
 aaagagcttc agtatgggca atctcggtca ttaccgttca ctttacaatg tcaatcaactg 540
 ttctgggaca agcgaattgg gatctgcaga tcaggatggg tatttgtctg atggattttgt 600
 tcattctctc agcaatgcac gcgagagaaa aaaaggcgtc ccatggtcgg aggaagaagca 660
 caggatgttc ttgtatggac tggaaaagct tgggaagggt gactggagag ggaatatccag 720
 gaattttgtg acgaccagaa caccacacac agtagccagc catgcccaga agtatcttct 780
 aaggcgagac aatcttaata aaagaaaagc tcgatccagt ctctttgata tgtgtctcta 840
 tgattcccat gtcacaagct cttttcgagc agaagactca ttgggaagcc tttatgaatt 900
 ttgcacaaaa catctgggtt tgggggtatc gcctaatttc gaactatatt catttggtgt 960
 ttctccaaat ttatctctag gaagatccct gcaaccagtg gaagcagttc ttgaagagaa 1020
 agcagcccat tatcatctg tgaactcaga agaag 1055

<210> 2039
 <211> 167
 <212> DNA
 <213> *Pinus radiata*

<400> 2039
 tgggtacagc tctgtagcgg aatagatgaa catgcagctg gattctgttc tcaactttgtg 60
 ttgacaccaa ttgatgcctc ttttctgat gatgtcttc tggctccctc tgggttccga 120
 gtaattctct tagaatcggg atcagaattgt ttctctcca aaacgga 167

<210> 2040
 <211> 357
 <212> DNA
 <213> *Pinus radiata*

<400> 2040
 ggagtgttga aattcccctg ttttgatctg ataactatga atctgatgga gtctttttgag 60
 gcaaaaggaa agggagagaa gaggagaacg gtgaggggga aaacccagtt gaagagaatt 120
 gagaacggga ccagcaggca ggttactttt tgtaagcgca ggaatgtgtc gctgaagaaa 180
 gcgtacgagc tgtcagtgct ttgtgatgcc gaagtggcac ttattgtttt ctcccaga 240
 gggagagctg atgagttcgc taatcccagc atgcagaaaa tgttggaaag atacgaaaaa 300
 tgttcagaag gaagtaaccc gacgagtaca gcaaaagagc aagacgtcca gtgttta 357

<210> 2041
 <211> 438
 <212> DNA
 <213> *Pinus radiata*

<400> 2041
 ccgaagcaag atcagaactc cgttacttac atacaggagc atggccatgg cagctggagg 60
 gctctgccgc agaaagctgg gttgctgaga tgcgggaaaa gctgcagatt gcgttgggtc 120
 aactatctaa gccagatgat caagcggggg aagttcactg tgcaggaaag gcagactatt 180
 attcaacttc atgcaactact tggaaacagg tggctcgcca ttgctactca ccttcccaag 240
 cgaaccgaca acgaaatcaa aaactactgg aataccacc tgaagaagcg cttgctgcag 300
 atgggaatcg acccctgagc gcacaagccc aagtcogaat cgattatggt acctgtgtgt 360
 cagtcgtcca atgggtcttc gaattcgagc catatggcgc agtgggagag cgcgcgcctg 420
 gaagcgaat cgaaggct 438

<210> 2042
 <211> 319
 <212> DNA

<213> Pinus radiata

<400> 2042

ggaattttca	ttggaggaag	ttgtgttggt	ggggatcaaa	gtcattcaat	gagtggaat	60
ggagccctag	catttgatat	ggagtatgct	cgttggttgg	atgagcatca	tcgacagata	120
aatgaactga	ggtcagcagt	gaactcacat	gtgggggaca	atgagctgcy	tggtctgggt	180
gaaggtgtca	tgggacatta	cgatgaaatt	tttctgtctg	agactgtagc	ttcaaaagct	240
gatgtcttct	atctgtgtct	tggcatgtgg	aagacgcctg	cagaaagatg	cttcatgtgg	300
atgggaggat	tccgtcctt					319

<210> 2043

<211> 404

<212> DNA

<213> Pinus radiata

<400> 2043

aaccggagag	caagaacaaa	gtggaaacgc	aacgaagtgg	agtgcgataa	tctgaaacgg	60
tggtgcgaga	gtctgagga	ggagaacaga	agattggaga	aagaagtgcg	gtcgcgtgaga	120
gccatgaaag	tcccgagtc	acccaattcg	atgcctctgg	cagccgcgac	cctcgcaatg	180
tgctccggct	gcgaggcgct	tgcaatcaag	aaccgcggcg	ccgcccactt	ctccaccgcg	240
aagtcacaa	aatccctctt	tacaattatg	gggattgggg	atgtaaatat	gatataccaa	300
aataaccaaa	ccccttcaat	gggaatggga	gatgaaatga	attgaagaaa	gtgaacttaa	360
aaaaaaaaa	aaaaaaactc	gagactagtt	ctctctctct	cttc		404

<210> 2044

<211> 379

<212> DNA

<213> Pinus radiata

<400> 2044

ctggaaacctg	atagaagaga	agattgaagg	aagatcagga	aagagctgca	ggcttcgggtg	60
gttttaactag	ttggacccaa	gaatcaaccg	aaggcccttc	actgaagaag	atgagaggaaa	120
gctcatggca	gcccatcgct	tatatgggaa	taaatgggcc	atgattgctc	gcttatcttc	180
tgggagaact	gataacgctg	tgaagaacca	ctggcatggt	atcatggcca	ggagatacacg	240
agagcaatct	agtgcttttg	ggagaaggaa	attgcctcaa	gttcatagaa	gagagaaacg	300
tgccctgcaat	gatgatgaaa	cgaggatggg	cagcagcagc	tgcaaatatg	gggtggataa	360
atatagctct	ctcaaatct					379

<210> 2045

<211> 369

<212> DNA

<213> Pinus radiata

<400> 2045

ctcattgctt	acattcgagc	caacggcgaa	ggcagctggc	gttcctcttc	caaggctgca	60
ggcgctgcga	gatgcggaaa	gagctgtagg	ctaagatgga	taaaactact	gcgtcccgat	120
ctcaagcgtg	gaagcttcac	agaagaagaa	gacgaactca	tcatcaaaact	ccactcgtct	180
gtggcgcaac	agtggtctct	tattgcagga	agattgccgg	ggcggaacga	caacagagata	240
aagaactact	ggaaactca	catcaagaga	aaattgtctg	tcaagggaaat	cgacccccag	300
tcccatcgct	ctctcgggca	gccctacagc	agcaacaata	tgcccgctct	tcgggtatatt	360
ctgacctctg						369

<210> 2046

<211> 530

<212> DNA

<213> Pinus radiata

<400> 2046

ctttccaatt	ttgagcccaa	gcaaatcaaa	gtttggtttc	agaatcgaa	gtgccgagag	60
aagcagagga	aggaagcctc	gaggcttcag	actgttaaca	ggaagctgac	ggcaatgaac	120
aagttgtctc	tggaggagaa	cgatcgctct	cagaagcaag	tttcacagtt	gggtgatgag	180

aatggttaca	tgcagacgca	gctacagaat	gcattctgtgg	ccgccacaga	cacaagctgt	240
gagctctgtg	tgaactagtg	tcagcaccaa	cataatccaa	cacctcagca	tcceccaaga	300
gctgetagcc	ccgetggact	cctgtctata	gcagaggaga	ccttgacaga	gttcccttca	360
aaggctaaag	gagctgctgt	cgattgggtc	cagatgcctg	ggatgaagcc	tggctcggat	420
tcgatggta	tgttagctat	ttcaaatact	ttgaatggag	tagctgcaag	tgcttgccgt	480
ctttaggat	tagatctcac	aaaggttgca	gagatcctta	aagatgcgcc		530

<210> 2047

<211> 358

<212> DNA

<213> Pinus radiata

<400> 2047

gctctaccag	tgtcaagcct	tgtttgaaaa	tggcgcagtc	gaaaaactct	caagaacctt	60
taatgatcta	tatgatgatt	taaaagaaga	aatactgtcg	tggctgcagc	tggaaatgtgt	120
gtgcagattt	cgcagctgtc	caaagcagtg	gaataatctc	ctgtcatcac	acaatttcat	180
aaaaaaggta	tggagaaga	agcctgtcaa	catgaaccca	tggctcgttc	tgcattcctgt	240
caactcctcc	tattgtttgg	catactgctt	cttcacaaga	acctggaaga	ctactcctcc	300
tatctccatt	gaaaatgcc	ataattatgg	agaaaaacga	atcttgggga	tcagctgtc	358

<210> 2048

<211> 376

<212> DNA

<213> Pinus radiata

<400> 2048

aagacaagaa	gctcattaat	ttcctgacta	ctcatggcca	atgctgcttg	cgcaccgttc	60
cagagcttgc	cgggatttca	agatgcggaa	agagttgcag	gctgagatgg	acgaattatc	120
ttcgaccgga	tttgaacgga	ggagctcttc	cagagtcgga	ggagaaactt	atttttagatc	180
ttcatctcgc	tgttggttaac	agatggtcga	agatgcccct	gtttctgcct	ggcgaaacgc	240
ataacgagct	aaagaaactc	tggaaacacc	acatcaagaa	gaagctgaag	cgcattgggac	300
tcgaccccg	cgacgcacag	gctattttcag	aaacactacc	acagccagcc	cctgtagctg	360
agaataatga	tgtccc					376

<210> 2049

<211> 656

<212> DNA

<213> Pinus radiata

<400> 2049

caaaacaatca	tcacgagatg	aaattccctt	cagaatggga	tttctgagat	tcgactcttg	60
atctgttgtct	gcgatctgat	cacattttat	tgggggttta	gggtttaagt	tttctctgct	120
aatggcatctg	atgaaaaggaa	aattctccggg	tcacgatgag	cccgatcgga	tcaaggggcc	180
ttggagcccc	gaggaggagc	cagcgtctga	gcatttctgt	cagaaatacg	ggccacgcga	240
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gtgcaaccag	ctgagccccc	aagtcgagca	ccgccccttc	actcctgaag	aggaagccac	360
tatcgtgaga	gccacgcgcc	agcagggcaa	caaatgggccc	acgatctgcg	gcattgctcag	420
cggcagaacc	gacaacgcta	tcaagaacca	ctggaaactcc	actctcagga	ggcgttgcca	480
aggtgggggc	gccctcgta	tcgacgacga	gatctccagc	ggcgccgacg	ggtttcgaaa	540
acggaacctc	agcgaagacg	ccgatgccag	ccggaaattc	aagaagctca	gcctcgggac	600
gacgacaacg	accacgacca	cggagcctag	cacctcctcg	gcctcggatg	ggagcg	656

<210> 2050

<211> 466

<212> DNA

<213> Pinus radiata

<400> 2050

atggggaaaga	cgaagatgga	gatgaaacac	attcaaaacc	ctagccgccc	ccaagtattc	60
ttctcgaaacg	gcaagacgga	attgctaata	aggcgattcg	agctttctgt	ttctcgggat	120
gctgaagtgc	cccttatcat	tttctcggaa	actggcaaga	tcagcgagtt	tcgaagccac	180

aacgacatgg	caacaatact	ggaaaaaatat	cgcatataca	cgcaaacaga	aacagatgga	240
aacatggggg	cttcgtcggt	ccaaagcgtg	aagggatggg	ttcctaattt	tctcgagatt	300
gcggaattca	gtgtttgtgg	atgatcccta	ttattgcagt	gtgggttggg	gcacgagggg	360
tgcagttgac	tgcactcata	tgattggaag	gttggtgaat	cacaattgaa	agcggtgcac	420
gagggatggg	acaatttgaa	aaaacaggaa	cgaaacatgg	ttggtg		466

<210> 2051
 <211> 390
 <212> DNA
 <213> Pinus radiata

<400> 2051	
gtttgaagta	gaatttacct
atcaattgctg	ttaaagatac
tctgttttcg	gccctgaacc
60	
ctaccagggg	aacgcggcgc
catgtcttcg	aggagctgtt
cgttgtgcgg	ccttaattgac
120	
cacaattccc	gtacctgtgt
gggaagtggg	gtgatgctct
ttgggggttcg	tctgacggat
180	
ggaccaatga	gaaagagtgc
tagtatgaat	aatttgtcaa
acttatctca	atatgagcac
240	
toggatccgg	ctgaggttgc
cgctgaaggt	tttgatggtt
acgtctcggg	tgacctcggt
300	
catcatcca	gcaatgcgcc
tgagagggaag	aggggagctg
cctggacaga	ggaagaacac
360	
cggatgttcc	ttgtcgccct
tcagagagtc	
390	

<210> 2052
 <211> 312
 <212> DNA
 <213> Pinus radiata

<400> 2052	
gtttgaaggg	gaacgcggcg
ccatgtcttc	gaggagctgt
tcgttgtgcg	gccttaattgg
60	
ccacaattcc	cgtaacctgtg
tggaagtggg	tggaagtggg
tgtgatgctc	tttgggggttc
gtctgacgga	120
tggaaccaatg	agaaagagtgt
ctagtatgaa	taattttgtca
aacttatctc	aatatgagca
180	
ctcggaatccg	gctgaggttg
ccgctgaagg	ttttgatggt
tacgtctcgg	atgacctcgt
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tcattcatcc	agcaatgccc
gtgagaggaa	gaggggagtg
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300	
ccggatgttt	ct
312	

<210> 2053
 <211> 393
 <212> DNA
 <213> Pinus radiata

<400> 2053	
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gtcgtcaagt	aactttttct
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gaaaaagcgc	gcggagctgt
caatactgtg	cgacgctgaa
120	
gtggccttaa	tcgtcttctc
caacaaagac	aaactgtacg
agttcgccag	ttccagtatg
180	
accaagattt	tggaagaata
tcggaagcgt	tcaaatttaa
tacaagatat	cggtaaagat
240	
ccacagaatt	caagacattga
gttgacgcgt	ctaaaagaag
aggttgaccg	cttacaaaga
300	
tccagaagcg	atcttttggg
tgaagacctt	catcaactag
gtgctacgga	tctgcaacac
360	
ttagaacaac	agcttgaaag
agcgttacia	aag
393	

<210> 2054
 <211> 210
 <212> DNA
 <213> Pinus radiata

<400> 2054	
cacagttctgt	gaacctgtta
aagagaaatc	agtcgaggtc
aaactccttc	tgtttgcacg
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aggatgccca	gcattatgga
gaagcaaaat	agtggtgaag
atagtgatag	caagggtcag
120	
cttgataatg	gcaagtatgt
ccgttacacc	aatgagcagg
tggagacttt	agaacgtgct
180	
tataatgaat	gctcaaagcc
cagcacaagg	
210	

<210> 2055
 <211> 385
 <212> DNA

<213> *Pinus radiata*

<400> 2055

aaaaattgaga	atactacaag	ccggcaggtt	acattctgtga	agcggagaaga	tgggttctgtg	60
aaaaaagctt	atgagttatc	tctgctgtgc	gatgcagaag	tggctctctc	catcttctcc	120
accagtgagg	gactctatga	atttgogaat	aagagtgtta	gcgcgacaac	ggagcgggtac	180
atgagaacct	atgcagagaa	catgcctcag	tctcgagctc	tgtatccgga	ttgtcacccat	240
tggcaagagg	aagtcagaaa	acttacacag	caactgtgata	gtctaaccac	ttcgatccaga	300
caataatcgg	gtgaaggcct	tgaatcatta	agcatgaagg	agctcaagca	tattcaagtt	360
caattggaaa	aaagtattag	ttgtg				385

<210> 2056

<211> 545

<212> DNA

<213> *Pinus radiata*

<400> 2056

tgaagacctt	gatgattgta	tccatccacc	ggagaagaag	agaaggctga	ctgctgacca	60
agtgcagttc	ctggaaacga	gctttgagat	cgaaaaacaag	ttggaacctg	agcgcaagat	120
acagctagcc	aaggagtggg	gctccaacc	taggcaagtt	gcagctctgt	ttcaaaacgc	180
gcgggcaagg	tggaaaaaca	agcagttgga	aagggtattat	gatattctga	aatcacgccta	240
tgagaatttg	agagttgatt	atgatagcct	gctcaagaa	aaggataaat	taagggtctga	300
ggttaccttc	ctaacagaca	agctacacga	cagtgaccat	gaagccctca	caaaggattc	360
tgagctctgt	gacaagaaga	tctatcccca	gcctgcctcc	cactctgaat	tgatctgggga	420
gcctgaaga	agtactgctg	ccaaggatc	accaccaggt	tgtaaacacg	aagatcttct	480
gagctctgga	acagatagca	gtggggctct	ggatgaagat	agtcctcacc	atgttgactg	540
tggtc						545

<210> 2057

<211> 385

<212> DNA

<213> *Pinus radiata*

<400> 2057

aaacttgctc	acgggattccg	acccttccgg	ctaaaagctgc	tggatttctg	tgtgtattga	60
agatggggag	atctccctgc	tgtgaaaaag	ctcatatacaa	caaagggggc	tggaccacaag	120
aagaggacga	tgcctctatc	gccacatctc	gaactcacgg	cgaaggttgc	tggcgctcgc	180
ttcccaattg	cgcagggtcg	atgcgctcgc	ggaagagctg	caggctccga	tggataaaat	240
acctgcgtcc	tgatctgaag	cgtggaaact	tctcagaaga	agaagacgaa	ctcgctcatca	300
aaactccactc	cctactcggc	aacaagtggg	ctcttattgc	aggcagattg	cccggggcgga	360
cgacacaaga	gataaagaac	tactg				385

<210> 2058

<211> 436

<212> DNA

<213> *Pinus radiata*

<400> 2058

aaagaagggt	gttccctgga	ctgaagaaga	gcacaggcag	tttttgatgg	gccttcgcaa	60
gtacggcaaa	ggcgactgga	gaagtatttc	tagaaacttt	gttggtgtcaa	ggacacccaac	120
ccaagtgtcc	agccatgtct	aaaagtacta	cattcgggctt	gggtcggaata	ataaaaaacaa	180
gagaagatgc	agcatacatg	atatcaccac	tggtcatggt	acacagcagga	tgcctctctc	240
tttactgcac	gtttcttaata	ggcagactaa	ttccccctca	acacaggcag	aaatgaatca	300
ttcaccatgt	ctggacatata	ccatctcaga	tttcacgagg	acctctaata	aaactcttgg	360
gacctcaaat	agatgtgttaac	cttctatttt	caactcacta	tcctctaata	ctgtataccc	420
agagagggtt	tggggg					436

<210> 2059

<211> 624

<212> DNA

<213> *Pinus radiata*

<400> 2059
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 agctcgacga ccaacggggt ttggattctc cctgttcttt gttctgttgc gttaaagatt 120
 ggttgcagggt cgaatcgccc aggcggatgt gaattctcct gaggattgac aagatgacgc 180
 cgaagtgtct cgaactgtggc aacaacgggc ataactccag gacgtgccct aacccggcgc 240
 ggggtgaagct cttcgccgtt cggcttacgc atggcccgat cagaagaagc gctagtattg 300
 ggaatttgat gatgatgtcc aaccctagct ctcccgctga cccctccgag ccggcctctg 360
 ccgctgctgc tgcgcggcgc gcggcgccca gtggctatct ctctgatggt cttgttgaa 420
 cctccacttc ctccaattct cgcgagcgga agaaagggtg gccatggaca gaggaggaa 480
 atagaattgt tttgctaggt ttgcagaagc ttggcaagg tgattggaga ggaatagcac 540
 ggaattttgt cataacacga acacctaacc aggtagccag ccatgacacg aaatatatta 600
 ttcgacagag caatatgact agaa 624

<210> 2060

<211> 364

<212> DNA

<213> Pinus radiata

<400> 2060
 atcgaggaaa accagaatct tctcattttc acttgcgtgtg ggtttctctg gactaacgat 60
 gaagatgtct ctaccttcta atgttctcac tctcagtcgc gattccaatt ctaattccaa 120
 ttcgatctcc tcgtcaggag acgaactcgc cgcaaaagggt aggaagccat acacaatcac 180
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 gtatggccga gcattggagg gaatcgaaag gcacataggg acgaaaacag cttgtccagat 300
 acgaagccat gctcagaagt tcttctccaa gttggtaagg ggatcttcaa ataaagggtg 360
 gtct 364

<210> 2061

<211> 258

<212> DNA

<213> Pinus radiata

<400> 2061
 gagggataga catgaatcgg ggtccggcta ccaatgagtc tgagtattcg tccggttttc 60
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 gaacctttga gttggaggcg gagagggatc gaacctcgca cgtgagttcc aggacaagcg 180
 acgaggagga gataggttgc acgaggaaaa agcttcggct ttccaaggag cagtcgtcac 240
 tcttgaggga aagtttct 258

<210> 2062

<211> 347

<212> DNA

<213> Pinus radiata

<400> 2062
 aacttggagt cactcagctt gaaagaattg caacaactgg aaaagcaatt aggcaggggct 60
 ataaaaaaga tttataataa aaagatgaaa ataatttcac aatgtgcaa atcattatca 120
 gaaaaggtagc gctcttttga agaggagaat agtgaacttc ttaccaagtt gattccctaga 180
 cgcgattcct ccactctcgg ggctgcgtta tttgttgata catccatgcc aaaaatctcac 240
 tcagcaacgc aagcatggcg acaactcctc cagcagagtc ttgtgacagc agcgaagatg 300
 gcgacaaactc ctccagcgag gcacagtaat tcccagccga accacta 347

<210> 2063

<211> 267

<212> DNA

<213> Pinus radiata

<400> 2063
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 tgacgggttca agcgaaggaa gcgaggaata taacactcaa actgagtcac aagtggcag 120

aaagagaagt	tttgcataaa	tgatagtaga	tggagccaat	gctcagagta	ccaatattca	180
atcataataat	tcccaggctg	gagaacccta	tgtgacttcc	ggcgggcatg	caatgggtaa	240
tcccattagt	caagctgttg	ctgcagt				267

<210> 2064
 <211> 336
 <212> DNA
 <213> Pinus radiata

<400> 2064						
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tggtgatgaa	catgtggatt	gttcggcttt	tagaacctct	ccagcacac	ttagaagcat	120
ccagacatt	gatgtggaga	ctcaactggt	tataagacct	ccaactgtac	aacagcaccc	180
tgacgtcgat	agtcctcgat	aactgttgca	tatgcacatt	tctactcttc	atgaaataaa	240
caaacagtac	acctcatttt	gttcgccttt	tgtaaacgta	taattactac	tgcatatgta	300
agctttctct	tcaaaaaaaa	aaaaaaaaa	aaaaac			336

<210> 2065
 <211> 573
 <212> DNA
 <213> Pinus radiata

<400> 2065						
cgcagatcgg	gactgcaaac	agaaccatag	tcttgcaaca	ttcaatggga	cggactcctt	60
gttgtctgaa	agtgggactc	aatcgaggct	cctggacacc	cgaggaggat	ctttgcctct	120
caaattacat	cgaagctcac	ggagaaggcg	gggtggagaac	acttccaaag	aaagcaggct	180
tgctccgatg	cggggaagag	tgcagattgc	gttgatgaa	tatctccga	cccgatgtga	240
aaacccggga	catattacc	gaggaggaag	atttaatact	caggttgcat	cgtctctctg	300
gaacacagg	gtctttgac	gctgcgcgta	tgcccgccag	aacggataat	gaggtcaaga	360
actatctgaa	taccacctc	agcaaaaagc	tatcagtc	gggtatcgac	cccgccgacc	420
acaaaccggt	gtcagaatc	gaagacatat	gttcgagtc	cggaatagc	gaagtgaagc	480
gcaagtctca	acgggaaat	aacgctgaa	taccaagaaa	agttgccgat	ggcgcagttg	540
atatctcaaga	taagggaag	gatatcacag	aag			573

<210> 2066
 <211> 407
 <212> DNA
 <213> Pinus radiata

<400> 2066						
atttaactgg	gattgcaagc	tgcttgtgtt	gtttctgtgc	ttcaagcgaa	gggaaggga	60
gacattctta	gagaagaaaa	aatcaatat	caatggggag	ggggaagatt	gaaataaaaa	120
tgattgaaaa	tacagcaaac	aggcaagtc	cattctctaa	gagaaaagga	ggacttctta	180
agaaaagctc	cgagctctcc	gttttatgca	atgcagaaat	tgctctctac	gttttttcca	240
acactggcaa	actccatgat	tggtcaagct	ccagcatgaa	aaaagtattg	gagaagtacc	300
agaaatcgga	tcaaggacta	ggacttatgg	actaccaaca	acaacagctg	ttgtgtgaaa	360
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<210> 2067
 <211> 407
 <212> DNA
 <213> Pinus radiata

<400> 2067						
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gactaaaagta	atagtgtgcc	ccgaggtctg	gtgttcgaat	ctcgttggcg	tgaaaaggtca	120
aatttttctc	tcgagtttca	ttgattctga	aaaactggca	tagctatggc	gatgagcaat	180
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atcccggggc	gatccgggaa	atcgtgcagg	ctacgggtgt	gcaactcagc	gagccctcag	360
gtggagcaca	gaccttttac	cccgtccgag	gatgctgtca	ttctgca		407

<210> 2068

<211> 353

<212> DNA

<213> Pinus radiata

<400> 2068

atctttttctg	tagatggtgt	gaggacgtgc	tgaatagtgc	ctaaatcgtt	tcttcccgct	60
ttgggtcatcg	aacgagttcc	tataactcgc	caagaccagg	ttcttcacgg	actactaatt	120
ttgggcttct	acacatcttt	cccggaagta	gatggggcgg	gcactaggaa	gaacagaaat	180
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gctgaagaag	gctgcggagt	tgtcaatact	ttgcgatgca	acagtgggag	ttgttgtttt	300
ctctccggcc	gggaaacttt	ctgaatatgc	cagcacttgc	gagcaaatgg	ata	353

<210> 2069

<211> 393

<212> DNA

<213> Pinus radiata

<400> 2069

attcgaaacc	ctaccaatcg	gcactcatcc	ttctacaaac	gcaagggcgg	tttgcttaaa	60
aaagcatttg	aacttgcgtg	tctctgtgat	gctgaagtgt	ctctgataat	cttctctgaa	120
accggcagga	tttacgagtt	tgcaagccac	gatgatgtga	ccacagattt	ggcaaaaatac	180
cgaatacaaa	cgaaaactcg	cggaaacgca	atgccttcat	cgcttcaaaa	aacagagttt	240
gatcaattac	aagtcaggat	gttcaggag	aagatagaca	atttggagaa	aacgaaaaag	300
catatggtcg	gtgacaattt	ggagtcactg	acgtggaaag	aattgcaaca	agtcgaaaaag	360
aaattaaagca	aggctacaaa	aataatttgt	gcc			393

<210> 2070

<211> 461

<212> DNA

<213> Pinus radiata

<400> 2070

cagcctgtgg	ctctgaaaag	catcgctcct	cctcatcagc	cgccgcacaa	ccaaacgcgc	60
aaccaataca	tgcaaggatg	gtgggtttga	tatttaacat	ttatcattat	cagttacttc	120
aatcacaca	aaagcccaaa	gcgtggtaaa	ttacgaaatt	agaattatat	tatcatataa	180
aaaaaacctt	atcttctattg	tatagcagta	ggcttgattt	actgctatga	tagcggaggt	240
tttattgggc	aaacaaaccc	tactggtata	ttagaccttc	ttgtcgacaa	agtttaattg	300
cataaatctt	gtatgttaat	ctggccgcta	aaagagcgat	ggaataatag	ttgtcccat	360
cacaacacat	gatattgtta	aatccaacgt	gtatgtgtct	gcaaatattt	attatacact	420
acggtttatc	acatggtagt	cgatttcgca	taaaaaaaa	a		461

<210> 2071

<211> 373

<212> DNA

<213> Pinus radiata

<400> 2071

ggattccgac	ccttccggct	aaagctgctt	catttctgtg	tgtattgaag	atggggagat	60
ctccctgctg	tgaaaaagct	catacaaa	aagggcgctg	gaccaaaagaa	gaggacgac	120
gcctcatcgc	ccacattcga	actcacggcg	aaggttctgtg	gcgctcgctt	cccaaggcgc	180
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atctgaagcg	tggaaacttc	tcagaagaag	aagacgaact	catcatcaaa	ctccactccc	300
tactcggaac	caagtggtct	cttattgcag	gcagattggc	cgggcggaag	gacaacgaga	360
taagaactca	ctg					373

<210> 2072

<211> 506

<212> DNA

<213> Pinus radiata

<400> 2072

ggactgcaga	ggaagacaga	aaactggtga	atattatcac	cctgcatggc	catggatgct	60
ggcgcggaagt	accacaaact	gctggctctgc	ttagatgtgg	caagagtctgt	agattgctgt	120
ggacaaatta	cttgcgccca	gatttgaagc	gtggattatt	gtctgaatca	gaggagaagc	180
tcacattga	ttacatctgt	gccataggga	ataggtggtc	acgaatcgct	gcgcaattgc	240
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ccccgccca	gactctgtct	ctgcaagaaa	atgatcacaga	gcagcagcag	caggagcaac	420
ataatgagcc	tgatctctgat	cagaatcaga	gcagcaatgg	cactgtggag	acattggtct	480
cgagggccag	agaacccac	gaccac				506

<210> 2073

<211> 494

<212> DNA

<213> Pinus radiata

<400> 2073

attcagatgg	aacaacaaca	atgtctacat	atgaaagaaa	agccagctct	cgagaattct	60
atgctgttat	atactcttcc	ttgctgcaac	ttgaaggagg	tataacagag	tgagaagata	120
ataagcagaa	actgatttgc	aaagaaagat	acaagaaacg	tggtgatgaa	gagaggagac	180
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acttggagat	ttttacaagt	aatgaagaag	ttgttgacat	gaaaacattg	ggcagagaga	420
acttaaaaag	gctattttaat	tacattgata	aattgccact	tatagtgcga	gagagcctgt	480
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<210> 2074

<211> 1678

<212> DNA

<213> Eucalyptus grandis

<400> 2074

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aattctgcga	ggagccgcct	ctgggtgctgg	ctgacatttc	acctagaagt	cacaaaaact	120
ttgtagttag	cattttctgga	aagattttga	ggaaacacgc	gcagagggag	agagagagag	180
tggaagcaga	agaattctagt	ctctggatgg	ggaggcattc	ttgtgtgtac	aagcagaagc	240
tcagaaaaag	cttatgtgtca	cctgaagagg	atgagaagct	cttgaggcat	atctctcagt	300
atggccatgg	ttgttgaggc	ttctgtccca	agcaagccgg	ttcacagaga	tgccggcaaga	360
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ttgtgagcaa	tcaccaagag	aactcagatg	tgaacagttg	catctcagac	tttgttgata	840
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gacacaaata	gatagaggat	tatatattgt	gatggagcct	cagctgttga	agcagagagg	1500
gatcatattga	ttggtgcgga	cttgagaatt	tgtttgttgc	aggtgtggac	atggtgtggc	1560
tataattttt	tttttttacc	ctttttcttc	tttcaatgta	catagtctctg	atacaaaaca	1620

tctgcatccc cttgcctttt acctatatatt gctttaagaa aaaaaaaaaa aaaaaaaaaa 1678

<210> 2075
<211> 636
<212> DNA
<213> *Eucalyptus grandis*

<400> 2075
aaacagagag agagagagat catgagatcc ccagctccag ctccagcttc aaggggcaag 60
agcagcagca cggcaacgcc atgctgcagc aaggtgggga taaagagagg ccgctggacg 120
ccggagggaag acgaggtcct cgccagctac gtgaggaggg aagcgagggg gcggtggcgg 180
accctcccga agcgtgctgg cctccagcgc tgcggcaaga gctgccgcct ccgctggatg 240
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caagggaatg atccccggac tcacaagcca ttattgaacc ataaccctag ttcttcacta 480
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aatctacag tactcatgga agaaacccgc gacgaaaatg atctgaaagt gggcagacag 600
ccagctgggt cagcctcaaa acgcgggcgt tgccaa 636

<210> 2076
<211> 862
<212> DNA
<213> *Eucalyptus grandis*

<400> 2076
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<210> 2077
<211> 907
<212> DNA
<213> *Eucalyptus grandis*

<400> 2077
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aaaaaaa						907

<210> 2078
 <211> 658
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2078						
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gtgcctccta	gaaggatggg	gatgtatgac	ccgattcacc	aaattggaat	gtgggacgag	300
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aaattggaca	accagtcgga	ggatactctc	catggatcac	aggatactgc	tggcaagtat	420
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<210> 2079
 <211> 373
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2079						
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cgggatgattg	gcggtgactt	cggcctgtaa	ggacaagatg	gggatcgaca	acgggaagta	300
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<210> 2080
 <211> 421
 <212> DNA
 <213> *Pinus radiata*

<400> 2080						
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tgcttgctgt	cgctctgctt	tcttaactga	attaatgggt	gcctgtaaat	tttccgttta	240
aatataatgt	ttcttgatgt	cagataatac	gtttcttgat	tttcogatat	aatgtttcct	300
gattttccga	tataatgatt	ttcgattttc	cgtttatata	taattgtttc	tgattttccg	360
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c						421

<210> 2081
 <211> 746
 <212> DNA
 <213> *Pinus radiata*

<400> 2081						
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gctggcgcgc	gagtcacaac	tcaggggcaag	gggcctctcg	tctgccacgt	tgagaaacgt	720
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<210> 2082

<211> 244

<212> DNA

<213> Pinus radiata

<400> 2082

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aatacattcg	aattcatggc	gatgggtggg	ggagaagctc	ccccaaaaaa	gcagggtcta	180
agcgggtgtg	aaagagttgt	agattacggt	ggtaaaacta	tcttcgtccc	gacattaaac	240
gcgg						244

<210> 2083

<211> 1151

<212> DNA

<213> Pinus radiata

<400> 2083

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cttttggtgt	gaaaaatggc	ttcaaggctt	cccttgatgt	gataccaggt	gcattggcaa	1080
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<210> 2084

<211> 372

<212> DNA

<213> Pinus radiata

<400> 2084

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372

<210> 2085

<211> 1285

<212> DNA

<213> Pinus radiata

<400> 2085

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gatataaaa	ctggacagtt	ttcatttgag	gaagagcaga	ctataattga	actccatgct	300
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<210> 2086

<211> 1218

<212> DNA

<213> Pinus radiata

<400> 2086

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<210> 2087

<211> 473

<212> DNA

<213> Pinus radiata

<400> 2087

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gagaaggctc	atactaacaa	aggggctctg	actaaacaag	aagacgacgc	ccttatcgct	120
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tggaaacac	acatcaaaag	aaaattgctg	agcaaggagc	tcgaccccca	aacccatcgt	420
ccaactcgcc	agccaaacaa	taccccgctc	actcgccgtg	ttctcgagca	cga	473

<210> 2088

<211> 1150

<212> DNA

<213> Pinus radiata

<400> 2088

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<210> 2089

<211> 723

<212> DNA

<213> Pinus radiata

<400> 2089

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<210> 2090

<211> 768
 <212> DNA
 <213> *Pinus radiata*

<400> 2090

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<210> 2091
 <211> 479
 <212> DNA
 <213> *Pinus radiata*

<400> 2091

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aatgatttag	aacgcacaaa	acaggcaagt	caccttctct	aagagaagag	ggggacttaa	180
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cagcaccggc	aaactccatg	agtggtcaag	ctcgagctca	tcttttatgt	tacaaaaaag	300
catgaagaaa	attctcagaa	gataccagaa	atcagagcag	ggactaggac	tcagtgatta	360
tcaacatcaa	cagctgttgt	gtgaaatgag	acgaatcacc	aaagaaaatg	aaagccttca	420
agagcggtta	agccatatga	atggcgagga	agtcaattca	ttgaagctcc	cagagcttt	479

<210> 2092
 <211> 557
 <212> DNA
 <213> *Pinus radiata*

<400> 2092

gaaagaagga	aagaatgggg	cgaggcgcg	tcgagctgaa	cgcgatcgag	aataagatta	60
accgtcaggt	cagcttttcg	aaacgcggga	atgggtctgt	gaaaaaggcg	tatgaacttt	120
cagtgattatg	tgatgcagag	gtagcactga	taattattct	aagcagagga	aaactctatg	180
agttcgggaag	cgccgggag	ctcaagaatc	tggagcgata	tcaaaaatgt	tcatacgtat	240
tgcaagacgc	gactgtatcg	gaccgggag	cgcaaatg	gcatacaag	gttgccaat	300
taaaagccag	agtggaactt	ttacaacgat	cacaaaggca	cttattaggt	gaagacctgg	360
gccctttag	tattaaaggag	ctgcaacaac	tggaaactga	acttgaggtt	gcactgaac	420
atgttaggtc	aagaaagact	caagtcattg	tggaaatgat	ggatgaacta	cgcaagaaag	480
agcgaatttt	acaaagaagt	aacaaatctc	tcgcgaagaa	gttgcgaggag	gccgagggac	540
aggcattcaa	tgccatg					557

<210> 2093
 <211> 356
 <212> DNA
 <213> *Pinus radiata*

<400> 2093

agtatgtgaa	ttccctctgt	ttgatctgat	agctatggat	ctgatggagt	cttttgaggc	60
aaaggggaag	ggagagaaga	ggagaacggt	gaggggaaaa	accaggttga	agaggat tga	120
gaacgggacc	agcaggcgag	ttactttttg	taagcgcgag	aacggtctgc	tgaagaaagc	180
ttacagagctc	tcggtgtctt	gtgatgccga	agtggcactt	attgttttct	ctccaagagg	240

gaagcgctat	gagttcgccta	atcccagcat	gcagaaaaatg	ttggcacgggt	acgaaaaattt	300
ttcagaagga	agtaaaagcaa	cgagtagcagc	aaaagagcaa	gatgtccagg	gttttaa	356

<210> 2094

<211> 404

<212> DNA

<213> Pinus radiata

<400> 2094

gggcaagggg	aaagacacag	atgagaaaga	tgcagagcgc	gaccagcagg	cagggtacgt	60
tttctaaagg	cagaaatgga	ttgatgaaga	aagcttacga	gctgtcgggt	ctctcgcgatg	120
cccaactggg	actgatttgt	ttctccccc	gagggaaggt	ctatgaattc	tccagtaacct	180
gcatacgaaa	aatgttggca	cgatacgaaa	aatgttcaga	aggaagtgc	acaggtacat	240
caaaagagca	agatgtcccag	tgtttaaaac	gagaaagtgc	gaatatggaa	gaaaggattg	300
aaattcttga	atccatgcgaa	agaaagatgt	tgggagagga	gctggcatca	tggtgattga	360
aggatttgaa	tcagttggag	agccagggtg	aacgaggttt	gaga		404

<210> 2095

<211> 584

<212> DNA

<213> Pinus radiata

<400> 2095

tcgcagcgt	aagcggtcat	gggtgccggg	cggttaactc	ttgaaaaata	ttagattcga	60
ctccctgacc	ctgggaggag	gaagaagaag	aagaacagca	ggagggaagc	aaaatttctt	120
aatagttaacc	agagaatagc	agcgggtgaa	gaagcagagg	gatcttgcaa	tggggcgggg	180
tcgggttcag	ctgaggcgaa	tagaaaacaa	aataaatcga	caagtccagt	tttcgaagcg	240
ccggaaacgga	ctgctgaaga	agggcgtaca	gctatcagtg	ctgtgcgatg	ccgaagtggc	300
gctaataatt	ttctctacca	gaggaagact	ttaacagatt	gccagttcca	gcataaacaa	360
gcogttggaa	agatcacgaaa	aatgttccata	tgcaatgcaa	gataccacag	gcgttttcgga	420
ccgggaagca	cagaaattggc	accaagaagt	tacaaagtgt	aagggttaag	ttagctctct	480
gcagcgatca	caaaggcatt	tgttggggga	agatctgggt	ccgttaaatg	ttaaggagct	540
acagcagctt	gaacgtcagc	tggagggtgc	tctgacacat	ctta		584

<210> 2096

<211> 453

<212> DNA

<213> Pinus radiata

<400> 2096

ctctgtctg	ttctcgaat	cgcccaaat	gggaagaag	aggggtggagc	tgaaacgcac	60
tcaaaacccct	agcagtcgac	atgctacttt	ctctaaacgc	aagaatggat	tgctaaaaaa	120
ggcggttcgag	ctttctgtcc	tctgtgatgc	tgaagtgcgt	ctcatcattt	tctctgaaac	180
tggcaagatt	tacgaatttg	cgagcaataa	cgatatggca	gcaattcttg	gaaaactaccg	240
agtacacgaa	gaaggcactg	aaacgtccag	tccaaacatt	cttcaaaacg	taaaagtatca	300
tgaatcaggg	cttgagaaat	tgcaagagaa	gttgaccgct	ttgcaaaaag	agggaaaagaa	360
cttgattgggt	gaagacttgg	aggtattaac	aatgaaagaa	ctgcaacggc	ttgaaaaaca	420
gttacaat	ggcataaaaa	ggttagtgat	aga			453

<210> 2097

<211> 509

<212> DNA

<213> Pinus radiata

<400> 2097

gcaacgggag	ctttaagact	agaatatata	tgtagccctc	gggctctgac	gaataactgaa	60
actagagata	cccactctct	atctggtgtg	taaggcacgc	aaaatgggaa	agaaagaaggt	120
ggagggtgaaa	ctcattcaaa	accctaccag	tcgccaaagga	tggttctaca	accgcgaagtg	180
cggtttgctt	aaaaaagcgt	tgagctttc	tggtctctgt	gatgctgaag	tgtcccttat	240
aatctctctc	caaacggcga	agatttacga	gtttgcaagc	catgacagag	tcaacgcaat	300
tctcgcaaaa	taccgagatac	aaacgggaac	aacaacaaac	gcgatgcctt	cctcgcttca	360

aaacaccgag	cgggagacgt	tgcatgagga	gacaaatatg	ttgggaaaaa	ggaaaaaagt	420
ggagaagttg	catgagaaga	tcaatatgtt	ggaaaaaaga	ggaaaaaaca	tggttggtga	480
aaatttgagg	tcattaacgg	tcaatgaat				509

<210> 2098
 <211> 430
 <212> DNA
 <213> *Pinus radiata*

<400> 2098						
gtttgttgcg	gttctccgtt	ccgcgggtct	gattgattaa	ttaaagagca	agagtgcaga	60
aaggagtctg	gagaatggca	agaggaaaga	cccagatgaa	gaagattgag	aacgtgacca	120
gcagacaggt	cacgttttct	aagcgaagaa	atgggttgct	gaagaaggct	ttcagctctt	180
cgggtgctgt	cgatgcagaa	gtgggacctt	ttgtattctc	cccaagtggg	aagctcttat	240
aattttcgcg	tcctgtatg	ggaaaaattg	tggagaagta	tgaagaagaa	tcacgagaaa	300
gtggtataaa	taatgcggct	aaagagaaag	atactcagca	ttcaaaacgc	gaaattgcaa	360
atatggaaga	gaaaatttag	atcctcgaat	caacagaaag	aaagatgtgt	gggcaaaatc	420
tagcatcatg						430

<210> 2099
 <211> 513
 <212> DNA
 <213> *Pinus radiata*

<400> 2099						
tttcaatgcc	ctctcttttc	cagtgagcga	gtgttcaatt	ttccctgtgt	tgatctgata	60
cctataaatc	tgtatggattc	ttttgaggca	aagggaaaag	gagagaagag	gagaacgggt	120
aggggaaaaa	cccatgatgaa	gaggattgag	aacgcgacca	gcaggcgaggt	tactttttct	180
aaacgtatga	acggtctcct	gaagaaagct	tacgagcttg	cggtgctttg	tgatgccgaa	240
gtggcactta	tgtttttctc	cccaagaggg	aagctcttat	agttcgccaa	ttccagcatg	300
cagaaaaatg	tggaaacgata	cgagaagtgt	tcggaaggaa	tgaaaaacac	aagtatagca	360
aaaggggaag	atcccaaggc	tttaaaacga	gaaattgcga	atatggaaga	aaggattgag	420
atctctgaac	gcacgcgaag	aaagatgttg	ggcgaggaa	tgccatcatg	tgcatggaag	480
gatttaaatc	agttggagag	ccaggttgaa	cga			513

<210> 2100
 <211> 526
 <212> DNA
 <213> *Pinus radiata*

<400> 2100						
ggattcttgt	atttttgtgt	gttgctgctg	caacagttct	taaataccaa	gacattgatg	60
agagcttgag	taatatcttc	gcaaaaacc	aagtaaaacc	tgaagctagt	ccaaactagt	120
ggaaggaacc	tcggctattc	tgtaaagtca	ctcagatttt	gagaaactct	tgggattttg	180
ctcaaaatgg	ggcgtggtta	aataagatc	aagaagatcg	agaacagcgt	gcacaggcag	240
gtgacctctt	gcaagcgccg	aggcggtctg	atgaagaaag	ctacgagct	ttcagtcgtg	300
tgcgatgcag	atgtagcgct	cattgttttc	tcgagccgag	gaaagtgtga	cgagctgggc	360
accagcaaca	acaacaacaa	cagtatgagg	tcaatattgg	aaagatatca	aaagtgttca	420
cagacggcaa	aacatatgaa	cttttcgaat	aatacttcag	acgagaaaaa	gaagcaagaa	480
ataaatttac	ttaaacacaa	aattggatca	gctaaactta	ctaaca		526

<210> 2101
 <211> 295
 <212> DNA
 <213> *Pinus radiata*

<400> 2101						
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gcagagctcat	ctctccattt	gcccatactg	tggaaacatga	agagtttttg	gaggttatca	120
agtttgga	tcatggcctg	acacaggaag	aagcttttgc	atcgagggat	atgtttctgt	180
tcgagctttg	tagtgggctc	gatgaaatg	cagttggggc	ctgtgctgaa	cttgtctttg	240

ctccaattga tgcacatctta gctgacagtt ctcccttctgt ccccttctggt ttacg 295

<210> 2102
<211> 296
<212> DNA
<213> Pinus radiata

<400> 2102
ggagaatcat ggctcgacac aggaagaagc ttgtctatcg agggatatgt ttctgttgca 60
ggatctcgat cgacgtgttt ctattgctta gcagagaaac ttgaagtgtt aaattttta 120
ttttactaat tcaatttgaat tgatgatctt ttggacagct ttgtatgtggg 180
ctcgatgaaa atgcaggttgg gcctctgtct gaacttctct ttgtcccaat tgcgtcatcc 240
ttagctgaca gtcttctctt gctcccttct ggtttcagag tcattctctt agactc 296

<210> 2103
<211> 475
<212> DNA
<213> Pinus radiata

<400> 2103
gaagtgtgga tgttcttact gctttctcaa ctggaaatgg aggaacaatt gagcttttat 60
acatcgagat gtatcgccca actacttttag ctctgtcccg agatttctgg actcttagat 120
acacttctgt atggaaagat ggtagtcttg ttgtttgcga gagatccttg agtggaaatc 180
agggaggttc cagcatgccc gcggtgcagc agtttgttag agcagaaatg caacccagtg 240
gatatctgat tcggccatgc gaaggtggag gtctctaat tcaatttgtt gaccatattg 300
atttggagac atggagtggt cctgaagtgc tacgtccact gtatgaatca tccactgtac 360
ttgcccacaaa ggttacaatg tcggccttac gccatttggc tcaaatagca caagaggcat 420
cttctgatgt ggtccttgcc tggggaagac aaccctgtgc attacggaca tttag 475

<210> 2104
<211> 1612
<212> DNA
<213> Eucalyptus grandis

<400> 2104
cccatctccc ttcaaaaaac gacgcggcgg acgacgacga cccccacca ccaaccaccac 60
catcgacgac tcggcacagc acgcgaacca gtgcgggaaa gttcgagaag gaattcgagc 120
ctcgggaatc ggcgcgggaga agaggaggaa gacgacgaat cggagcctta tgggtgtccg 180
gaaccggaac ccggcgcaag ggttttactt ctctgatccc gcgaacacga ggtatccagg 240
tgtcaacgac ggctcggcgg ccgagggcgg ccgcccgcgc cgcgcgtacg cggaggacc 300
gagcaagaag gtgcggaagc cgtacacccat caccagtcac agggagagct ggaccgagca 360
ggagcagcac aagttcctgg aggcgcttca cctgtttgat cgtgattgga agaagattga 420
agcttttctt ggcataaaaa cagttattca gattctgtag catgcacaaa agtactttct 480
aaaggttctc aagaatggga caagtgaaca tgtaccacca ccacggccaa aaaggaagc 540
tgcccatcca taccacaga aagcacctaa agctccagtt gtttcccaag tcaattggcc 600
atttcaagtt tcatctgtct ttttggaaac cgggcataat gtcagacctg atggtcagc 660
attgtctggg aattcccgta caagtgtagc ctgtgtctta tggagtcata actctgtacc 720
cgcaatgat gcatcacagg ggaacaaaaga tgttaggaatt tctggcccaac cagttccaag 780
taattgttgc aacagcagta gtaatgacag tacaccgagg tccgtgccaa atgtccaagc 840
aattgaacct ttggtacaac agaaacctct tagagttatg ccagatttcg ccgaagtata 900
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catcatcgga agtttaggct ttgtataggt tcttatcgga ctttgtatag ggctcgagca 1440
tacagagatg tctgtcgacc tagaataaag cttaggcgtc gggctctgtg ttgtttatga 1500
tatgtgcgcy tgtaagatcg aagaagagga agtagcgagg aacgtttgat caggttgtgg 1560

tttttggtag actatatatgc attggtgctt ttctctcaaa aaaaaaaaaa aa 1612

<210> 2105
<211> 1576
<212> DNA
<213> Pinus radiata

<400> 2105
gaccttttgc atctttatta ttcttcggcc tgtgaaaaga tggggagatc tccgtgctgt 60
gagaaggctc atactaaca agggggcctgg actaaacaag aagacgaccg ccttatcgct 120
cacattcgag ccacacggcg agggggcctgg cgttcgcttc ccaaggccgc agggctgctg 180
agatgcggca agagctgcag actgcgatgg ataaactacc tgcgtcccgca tctgaagcgt 240
ggaagcttca ccgaagaaga agacgagctc atcatcaaac tccactcctt cgttggcaac 300
aagtgtgctt taattgcagg gagattgccg ggaacggagg acaacgagat aaagaactac 360
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ccactcggcc agccaaacaa taccgccgtc actcggcctg ttctcgagca cgaattccg 480
gcattccaga accctgcaac gccggagata gcagacttgt tacagacca ccgattggaa 540
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ttgtgtatca gtttgcgctc taattcggcc ccgggcgtaa acagagtatc gagcgtcgat 660
acaacagtag attcaaatc taattcggc gacggcgtgt gctggcagtt tctctgacgg 720
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gggcaaaact cagggtgact gtcaaaagcat gaaagtcag aatttgatgg tgggatatct 1380
aacatacgcc agaggtacc ccaatgatgt agaaagtatt gggctgggtg cctattacca 1440
cttgcagttg ttaggaaaa agtgtatgt tattgcagga gtgtaataaa tgaggttagat 1500
atttttctcc ccgatgtatg ttcaatatag actcagcgac gttttatgtg tgttgaaaaa 1560
aaaaaaaaa aaaaaa 1576

<210> 2106
<211> 210
<212> DNA
<213> Pinus radiata

<400> 2106
ctatgtctatt acagaatgtg cctccagcac tacttgtcgg ctcttgcgg gaacatcgct 60
cagagtgggc tgattgtaac attgatgctt attcttcagc taccatgaaa gcaaatgctt 120
acaattgttc aggttcactg ggaggcatta caggagagca agttatcctt ccaactggac 180
atactgtgga acatgaagag ttcttggaa 210

<210> 2107
<211> 27
<212> PRT
<213> Pinus radiata

<400> 2107
Met Lys His His Val Val His Asn Cys Cys Ser Lys Lys Ala Val Lys
1 5 10 15
Arg Gly Phe Trp Ser Pro Glu Glu Asp Leu Lys
20 25

<210> 2108
<211> 126
<212> PRT

<213> Eucalyptus grandis

<400> 2108

Gly Ile Ser Arg Asn Phe Val Lys Thr Arg Thr Pro Thr Gln Val Ala
 1 5 10 15
 Ser His Ala Gln Lys Tyr Phe Leu Arg Arg Thr Asn Gln Asn Arg Arg
 20 25 30
 Arg Arg Arg Ser Ser Leu Phe Asp Ile Thr Thr Asp Ser Tyr Phe Gly
 35 40 45
 Val Ser Ser Ser Thr Met Glu Gly His His Gln Ala His Gln Val
 50 55 60
 Pro Ser Phe Pro Leu Ser Leu Pro Pro Ala Val Ser Pro Gly Thr Gly
 65 70 75 80
 Glu Lys Leu Leu Glu Ser Leu Arg Leu Arg Lys Glu Gly Cys Gln Ser
 85 90 95
 Lys Pro Thr Pro Ser Lys Pro Ile Arg Pro Val Pro Ile Leu Pro Ile
 100 105 110
 Pro Pro Ser Ser Lys Met Ala Ala Leu Asp Leu Asn Lys Ala
 115 120 125

<210> 2109

<211> 130

<212> PRT

<213> Eucalyptus grandis

<400> 2109

Met Pro Gly Phe Thr Arg Ala Arg Lys Met Ser Met Ser Gly Glu Glu
 1 5 10 15
 Glu Gly Asp Leu Arg Arg Gly Pro Trp Thr Arg Glu Glu Asp Asn Leu
 20 25 30
 Leu Ile His Ser Ile Thr Cys His Gly Glu Gly Arg Trp Asn Met Leu
 35 40 45
 Ala Lys Ser Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg
 50 55 60
 Trp Leu Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Asn Leu Thr Pro
 65 70 75 80
 Gln Glu Gln Leu Met Ile Leu Glu Leu His His Lys Trp Gly Asn Arg
 85 90 95
 Trp Ser Lys Ile Ala Gln Tyr Leu Pro Gly Arg Thr Asp Asn Glu Ile
 100 105 110
 Lys Asn Tyr Trp Arg Thr Arg Val Gln Lys Gln Ala Arg Gln Leu Asn
 115 120 125
 Ile Glu
 130

<210> 2110

<211> 146

<212> PRT

<213> Eucalyptus grandis

<400> 2110

Cys Cys Asp Lys Val Gly Leu Lys Lys Gly Pro Trp Thr Pro Glu Glu
 1 5 10 15
 Asp Gln Lys Leu Leu Ala Tyr Ile Glu Glu Asn Gly His Gly Ser Trp
 20 25 30
 Arg Ala Leu Pro Ser Lys Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys
 35 40 45
 Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Lys
 50 55 60
 Phe Ser Leu Gln Glu Glu Gln Thr Ile Ile Gln Leu His Ala Leu Leu
 65 70 75 80

Gly Asn Arg Trp Ser Ala Ile Ala Thr His Leu Pro Lys Arg Thr Asp
 85 90 95
 Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu Lys Lys Arg Leu Ala
 100 105 110
 Lys Met Gly Ile Asp Pro Val Thr His Lys Pro Lys Asn Asp Ala Leu
 115 120 125
 Val Ser Ser Asp Gly Gln Ser Lys Ser Ala Ala Lys Leu Ser His Leu
 130 135 140
 Ala Gln
 145

<210> 2111
 <211> 99
 <212> PRT
 <213> Eucalyptus grandis

<400> 2111
 Arg Thr Leu Pro Lys Asn Ala Gly Leu Arg Arg Cys Gly Lys Ser Cys
 1 5 10 15
 Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Arg
 20 25 30
 Phe Thr Phe Glu Glu Glu Thr Ile Ile Gln Leu His Gly Val Leu
 35 40 45
 Gly Asn Lys Trp Ser Ala Ile Ala Ala Gln Leu Pro Gly Arg Thr Asp
 50 55 60
 Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile Lys Lys Arg Leu Leu
 65 70 75 80
 Lys Met Gly Ile Asp Pro Val Thr His Ser Pro Arg Leu Asp Leu Leu
 85 90 95
 Asp Leu Ser

<210> 2112
 <211> 59
 <212> PRT
 <213> Eucalyptus grandis

<400> 2112
 Met Gly Arg Gly Arg Leu Gln Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Ala Gly Leu Leu Lys Lys Ala
 20 25 30
 His Glu Ile Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
 35 40 45
 Ser Ala Lys Gly Lys Leu Phe Glu Tyr Ser Thr
 50 55

<210> 2113
 <211> 79
 <212> PRT
 <213> Eucalyptus grandis

<400> 2113
 Val Lys His Asp Val Glu Thr Leu Ser Ser Lys Val Lys Met Ala Glu
 1 5 10 15
 Glu Thr Val Lys Arg Val Thr Gly Leu Asn Pro Met Leu His Val Met
 20 25 30
 Ser Asp Met Ser Ser Val Gly Val Pro Pro Phe Asp Gly Ser Pro Ser
 35 40 45
 Asp Thr Ser Ala Asp Ala Ala Val Pro Val Arg Asp Pro Lys His Gln
 50 55 60

Phe Tyr Gln Thr Asn Ser Ser Asn Pro Ala Ser Ser Ala Asp Asp
65 70 75

<210> 2114
<211> 104
<212> PRT
<213> Eucalyptus grandis

<400> 2114
Gln Val Ala Gln Leu Arg Val Glu Asn Ser Thr Leu Leu Lys Arg Leu
1 5 10 15
Ser Asp Ile Ser Gln Lys Tyr Asn Val Ala Ala Val Asp Asn Arg Val
20 25 30
Leu Glu Ala Asp Val Glu Thr Leu Arg Ala Glu Val Lys Met Ala Glu
35 40 45
Glu Thr Val Lys Arg Val Thr Gly Leu Asn Pro Met Leu His Val Met
50 55 60
Ser Asp Met Ser Ser Val Gly Val Pro Pro Phe Asp Gly Ser Pro Ser
65 70 75 80
Asp Thr Ser Ala Asp Ala Ala Val Pro Val Arg Asp Asp Pro Lys His
85 90 95
Gln Phe Tyr Gln Thr Asn Ser Met
100

<210> 2115
<211> 71
<212> PRT
<213> Eucalyptus grandis

<400> 2115
Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu
1 5 10 15
Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg Tyr Ile Thr Gln Tyr
20 25 30
Gly His Gly Cys Trp Ser Ser Val Pro Lys Leu Ala Gly Leu Gln Arg
35 40 45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
50 55 60
Leu Lys Arg Gly Thr Phe Ser
65 70

<210> 2116
<211> 55
<212> PRT
<213> Eucalyptus grandis

<400> 2116
Glu Leu Gln His Leu Glu Gln Gln Leu Ser Gly Ala Leu Ser Ser Val
1 5 10 15
Lys Glu Lys Lys Glu Gln Trp Leu Leu Glu Gln Leu Glu Arg Ser Arg
20 25 30
Leu Gln Glu Gln Arg Ala Met Leu Glu Asn Glu Thr Leu Arg Arg Gln
35 40 45
Val Asp Glu Leu Arg Gly Phe
50 55

<210> 2117
<211> 62
<212> PRT
<213> Eucalyptus grandis

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<400> 2117
Glu Ile Ser Val Leu Cys Asp Ala Asp Val Ala Leu Ile Val Phe Ser
 1           5           10           15
Thr Lys Gly Lys Leu Phe Glu Tyr Ala Thr Asp Cys Met Glu Arg
           20           25           30
Ile Leu Glu Arg Tyr Glu Arg Tyr Ser Tyr Ala Glu Ser Gln Val Leu
           35           40           45
Thr Asn Asn Ala Glu Thr Asn Gly Asn Trp Thr Leu Glu His
 50           55           60

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<210> 2118
<211> 49
<212> PRT
<213> Eucalyptus grandis

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<400> 2118
Leu Phe Pro Pro Gln Ser Glu Gly Phe Phe Asn Pro Met Asp Gly Asn
 1           5           10           15
Leu Ser Leu Gln Ile Gly Tyr Asn Pro Thr Cys Leu Asp Glu Met Asn
           20           25           30
Ala Ser Val Ser Ser Gln Asn Val Ala Gly Phe Ile Pro Gly Trp Met
           35           40           45
Leu

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<210> 12119
<211> 195
<212> PRT
<213> Eucalyptus grandis

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<400> 2119
Ser Gly Ser Gln Val Ser Ile Ile Met Ile Ser Ser Thr Gly Lys Leu
 1           5           10           15
His Glu Tyr Ile Ser Pro Ser Thr Ser Thr Lys Lys Met Tyr Asp Gln
           20           25           30
Tyr Gln Gln Ala Leu Glu Val Asp Leu Trp Ser Ser His Tyr Glu Lys
           35           40           45
Met Gln Glu Asn Leu Arg Lys Leu Lys Glu Val Asn Lys Lys Leu Gln
           50           55           60
Leu Glu Val Arg Arg Arg Phe Gly Glu Gly Leu Asn Gly Met Ser Leu
           65           70           75           80
Ser Glu Leu Cys Gly Leu Glu Gln Asp Met Asp Asn Ala Val Ser Leu
           85           90           95
Ile Arg Glu Arg Lys Tyr Lys Thr Leu Gly Asn Gln Ile Asp Thr Ala
           100           105           110
Arg Lys Lys Lys Lys Asn Ala Glu Glu Ile Asn Lys Ser Leu Leu Gln
           115           120           125
Asp Trp Thr Asn Leu Ile Lys His Leu Arg Glu Asp Asp Pro His Phe
           130           135           140
Gly Met Val Asp Asn Gly Arg Asp Tyr Glu Ala Val Ile Gly Tyr Thr
           145           150           155           160
Asp Ala Ala Ala Ala Ala Arg Leu Tyr Thr Leu Arg Leu Gln Pro Asp
           165           170           175
Gln Pro Asn Leu Thr Ser Gly Gly Gly Ser Glu Ile Thr Thr Tyr Pro
           180           185           190
Leu Leu Glu
           195

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<210> 2120
<211> 92
<212> PRT

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<213> Eucalyptus grandis

<400> 2120

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Met Ala Phe Lys Ser Pro Gly Gly Ile Thr Trp Leu Lys His Leu Leu
 1          5          10          15
Val Lys Asn Phe Tyr Leu Gly Glu His Leu Lys Cys Arg Asn Gly Leu
          20          25          30
Ile Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ile Asp Ile Ala
          35          40          45
Leu Ile Met Phe Ser Pro Ser Asp Arg Val Ser His Phe Ser Gly Lys
          50          55          60
Arg Arg Ile Glu Asp Val Leu Thr Arg Phe Ile Asn Leu Thr Asp Gln
65          70          75          80
Glu Arg Thr Leu Leu Asp Val Gln Asp Arg Arg Thr
          85          90

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<210> 2121

<211> 41

<212> PRT

<213> Eucalyptus grandis

<400> 2121

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Met Gly Arg Gly Arg Val Gln Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
          20          25          30
Tyr Glu Leu Ser Leu Leu Cys Asp Ala
          35          40

```

<210> 2122

<211> 96

<212> PRT

<213> Eucalyptus grandis

<400> 2122

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Leu Gln Tyr Asp Trp His His Leu Ser Phe Cys Val Ile Ile Ser Val
 1          5          10          15
Leu Asn Leu Gln Asn Thr Ile Asn Gly Ser Cys Ser Met Glu Ser Ile
          20          25          30
Leu Glu Arg Tyr Glu Arg Tyr Thr Tyr Ala Glu Arg Gln Gln Val Ala
          35          40          45
Thr Asp Ser Pro Gln Val Gln Gly Ser Trp Ser Leu Glu Tyr Pro Lys
50          55          60
Leu Val Ala Arg Ile Glu Val Leu Gln Arg Asn Ile Arg Asn Leu Ser
65          70          75          80
Gly Glu Glu Leu Asp Pro Leu Ser Leu Arg Glu Leu Gln Tyr Leu Glu
          85          90          95

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<210> 2123

<211> 76

<212> PRT

<213> Eucalyptus grandis

<400> 2123

```

Phe Leu Phe Arg Arg Lys Gln Gly Ala Val Glu Glu Leu Lys Met Val
 1          5          10          15
Gln Glu Val Arg Lys Gly Pro Trp Thr Glu Gln Glu Asp Phe Gln Leu
          20          25          30
Val Cys Phe Val Gly Leu Phe Gly Asp Arg Arg Trp Asp Phe Ile Ala
          35          40          45
Lys Val Ser Gly Leu Lys Val Ala Gly Glu Asn Asn Arg Tyr Val Arg

```

50 55 60
 Phe Lys Ala Trp Gly Phe Phe Gly Arg Ser Tyr Phe
 65 70 75

<210> 2124
 <211> 55
 <212> PRT
 <213> Eucalyptus grandis

<400> 2124
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Asp Gln Arg Leu Ile Asp Tyr Ile Arg Leu His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ser Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu
 50 55

<210> 2125
 <211> 123
 <212> PRT
 <213> Eucalyptus grandis

<400> 2125
 Val Glu Gln Val Gln Phe Leu Glu Lys Ser Phe Glu Val Glu Asn Lys
 1 5 10 15
 Leu Glu Pro Asp Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu Gln
 20 25 30
 Pro Arg Gln Val Ala Ile Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys
 35 40 45
 Thr Lys Gln Leu Glu Lys Asp Tyr Glu Thr Leu Gln Ala Ser Phe Asn
 50 55 60
 Thr Leu Lys Ser Asp Tyr Asp Thr Leu Ile Lys Glu Arg Asn Asp Leu
 65 70 75 80
 Lys Ala Glu Val Leu Asn Leu Thr Asp Lys Leu Leu His Lys Gly Asn
 85 90 95
 Glu Lys Glu Ser Ser Glu Ser Ser Ser Lys Ser Ser Gln Gly Leu Phe
 100 105 110
 Gln Asn Pro Ile Ala Asp Ser Val Ser Glu Asp
 115 120

<210> 2126
 <211> 105
 <212> PRT
 <213> Eucalyptus grandis

<400> 2126
 Met Ala Arg Phe Pro Arg Val Asp Lys Ser Asn Ser Lys Lys Thr Val
 1 5 10 15
 Lys Lys Gly Ala Trp Ser Ala Glu Glu Asp Gln Lys Leu Val Ala Tyr
 20 25 30
 Ile Lys Arg Tyr Gly Ile Trp Asn Trp Thr His Met Ala Glu Pro Ala
 35 40 45
 Gly Leu Ala Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr
 50 55 60
 Leu Arg Pro Asn Ile Lys His Gly Asn Ile Thr Gln Glu Glu Glu Glu
 65 70 75 80
 Ile Ile Ile Asn Leu His Arg Val Leu Gly Asn Arg Trp Ala Ser Ile
 85 90 95
 Ala Ser Arg Leu Ser Gly Arg Thr Asp

100

105

<210> 2127
 <211> 115
 <212> PRT
 <213> Eucalyptus grandis

<400> 2127
 Met Ala Arg Glu Lys Ile Lys Lys Ile Asp Asn Val Thr Ala
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Gly Leu Phe Lys Lys Ala
 20 25 30
 Gly Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Val Val Ile Phe
 35 40 45
 Ser Ala Thr Gly Lys Leu Phe Glu Tyr Ser Ser Ser Ser Met Lys Asp
 50 55 60
 Thr Leu Glu Arg Tyr Thr Leu His His Asn Asn Leu Glu Asn Met Asp
 65 70 75 80
 Gln Pro Ser Leu Glu Leu Gln Leu Glu His Ser Asn Asn Met Arg Leu
 85 90 95
 Ser Lys Glu Val Ala Glu Lys Ser His Arg Leu Arg Gln Leu Arg Gly
 100 105 110
 Glu Asp Leu
 115

<210> 2128
 <211> 155
 <212> PRT
 <213> Eucalyptus grandis

<400> 2128
 Met Gly Arg Lys Cys Ser Arg Cys Gly Asn Ile Gly His Asn Ser Arg
 1 5 10 15
 Thr Cys Thr Thr Phe Met Gly Ala Ala Ser Ala Cys Gly Leu Lys Leu
 20 25 30
 Phe Gly Val Gln Leu Asp Leu Ser Ser Ser Pro Pro Ser Ser Ser
 35 40 45
 Ala Ser Ser Gly Ser Ala His Pro Tyr Ser Leu Val Ile Lys Lys Ser
 50 55 60
 Leu Ser Met Asp Arg Leu Ser Ser Ser Ser Ala Ser Ser Ser Pro
 65 70 75 80
 Ser Ser Ser Leu Ser Ser Pro Arg Val Leu Ala Asp Glu His Cys Asn
 85 90 95
 Lys Thr Ser Leu Gly Tyr Leu Ser Asp Gly Leu Ala Ala Arg Ser Gln
 100 105 110
 Glu Lys Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe
 115 120 125
 Leu Met Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser
 130 135 140
 Arg Asn Tyr Val Thr Thr Arg Thr Pro Thr Gln
 145 150 155

<210> 2129
 <211> 145
 <212> PRT
 <213> Eucalyptus grandis

<400> 2129
 Arg Gly Trp Arg Gln Ile Glu Glu His Val Gly Thr Lys Thr Ala Val
 1 5 10 15
 Gln Ile Arg Ser His Ala Gln Lys Phe Phe Ser Lys Val Ala Arg Gly

```

                20                25                30
Val Ser Gly Ser Ser Glu Gly Val Ile Lys Pro Ile Glu Ile Pro Pro
      35                40                45
Pro Arg Pro Lys Arg Lys Pro Met His Pro Tyr Pro Arg Lys Ser Val
      50                55                60
Asp Ser Lys Glu Val Lys Leu Ser Tyr Gln Gln Glu Arg Ser Pro Ser
65      70                75                80
Pro Ile Ser Ser Val Ala Asp Glu Asn Thr Gly Ser Pro Thr Ser Val
      85                90                95
Leu Ser Ala His Gly Ser Asp Met Leu Gly Ser Ala Ser Leu His Gln
      100                105                110
Gln Asn Arg Cys Ser Ser Pro Thr Ser Cys Thr Thr Val Pro Ser
      115                120                125
Ile Gly Leu Ala Val Ile Glu Lys Gln Pro Glu Ile Phe Lys Glu Glu
      130                135                140
Asp
145

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<210> 2130
<211> 156
<212> PRT
<213> Eucalyptus grandis

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<400> 2130
Phe Gly His Glu Phe Thr Ser Ser Pro Ala Ser Ser Ser Ser Leu Ser
1      5                10                15
Ser Ser Arg Ile Ser Ile Gly Glu Asn Ser Ser Asp Lys Ala Ser Leu Gly
      20                25                30
Tyr Leu Ser Asp Gly Leu Leu Gly Arg Ser Gln Glu Lys Lys Lys Gly
      35                40                45
Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Val Gly Leu Glu
      50                55                60
Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Ser Tyr Val Thr
65      70                75                80
Thr Arg Thr Pro Ala Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu
      85                90                95
Arg Gln Val Ser Phe Asn Lys Lys Lys Arg Arg Ser Ser Leu Phe Asp
      100                105                110
Met Val Asp Val Lys Thr Ala Ala Gly Asp Arg Leu Gly Ser Leu Thr
      115                120                125
Ala Lys Pro Ser Glu Ser Val Pro Asn Cys Lys Met Gly Thr Leu Met
      130                135                140
Ser His Leu Gln Val His Asp Ala Arg Thr Thr Gln
145      150                155

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<210> 2131
<211> 49
<212> PRT
<213> Eucalyptus grandis

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<400> 2131
Met Val Gln Glu Val Arg Lys Gly Pro Trp Thr Glu Gln Glu Asp Phe
1      5                10                15
Gln Leu Val Cys Phe Val Gly Leu Phe Gly Asp Arg Arg Trp Asp Phe
      20                25                30
Ile Ala Lys Val Ser Gly Leu Lys Val Ala Gly Glu Asn Asn Arg Ile
      35                40                45
Glu

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<210> 2132

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<211> 151
 <212> PRT
 <213> Eucalyptus grandis

<400> 2132
 Asp Asp Val Cys Gly Gly Lys Arg Pro Glu Arg Pro Phe Phe Cys
 1 5 10 15
 Thr Tyr Asp Gly Glu Asn Gly Asp Asp Tyr Asp Glu Tyr Leu
 20 25 30
 His Gln Pro Glu Lys Lys Arg Arg Leu Ser Ile Glu Gln Val Leu Tyr
 35 40 45
 Leu Glu Lys Ser Phe Glu Thr Asp Asn Lys Leu Glu Pro Asp Lys Lys
 50 55 60
 Val Gln Leu Ala Lys Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Ile
 65 70 75 80
 Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Met Glu Lys
 85 90 95
 Asp Phe Asp Lys Lys Leu Gln Ala Ser Phe Asn Cys Leu Lys Ser Asp Tyr
 100 105 110
 Glu Ser Leu Leu Asn Glu Lys Glu Lys Leu Lys Ala Glu Val Ile His
 115 120 125
 Leu Thr His Gln Leu Glu Gln Arg Ser Asn Gly Ile Leu Asn His Ser
 130 135 140
 Thr Tyr Leu Asn Asn Cys Thr
 145 150

<210> 2133
 <211> 133
 <212> PRT
 <213> Eucalyptus grandis

<400> 2133
 Met Gly Ser Arg Thr Arg Val Gly Gly Gly Asp Asp Gly Arg Val
 1 5 10 15
 Val Asn Gly Met Pro Ser Phe Val Pro Gln Leu Pro Thr Ser Asn Ser
 20 25 30
 Met Gly Ser Glu Gly Asn Ser Ile Arg Ser Ser Arg Ile Thr Asp Phe
 35 40 45
 Gly Thr Leu Glu Gln Ser Leu Gly Tyr Arg Ile Glu Asp Ala Val Asp
 50 55 60
 Leu Ser Arg Asn Pro Val Phe Asn Gln Met Lys Ser Ser Ala Gln Ala
 65 70 75 80
 Leu Gly Ala Asp Val Gln Phe Gly Ser Leu Asn Lys Ser Leu Ser Ser
 85 90 95
 Ser Asp Arg Asn Leu Ser Val Asn Ile Val Gly Ser Gln Thr Leu Ser
 100 105 110
 Met His Arg Glu Ser Gln Ser Asn Leu Val Ser Ile Pro Gly Ala His
 115 120 125
 Arg Glu Asn Trp Gly
 130

<210> 2134
 <211> 150
 <212> PRT
 <213> Eucalyptus grandis

<400> 2134
 Met Pro Pro Pro Arg Ala Ala Thr Pro Asp Val Ala Gly Asp Glu Ser
 1 5 10 15
 Ser Gly Ala Asp Ala Gly Ala Gly Glu Ile Met Leu Phe Gly Val Arg
 20 25 30

Val Val Val Asp Ser Met Arg Lys Cys Val Ser Leu Asn Asn Leu Ser
 35 40 45
 Gln Tyr Gln His Pro Gln Asp Ala Asn Pro Pro Asn Ala Ser Gly Gly
 50 55 60
 Ser Gly Gly Asn Lys Glu Glu Ala Ala Lys Gly Tyr Ala Ser Ala Asp
 65 70 75 80
 Asp Ala Ala His Asn Pro Gly Gly Gly Arg Glu Arg Lys Arg Gly Val
 85 90 95
 Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu Gly Leu Gln Lys
 100 105 110
 Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn Phe Val Lys Thr
 115 120 125
 Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg
 130 135 140
 Arg Ser Asn Leu Asn Arg
 145 150

<210> 2135
 <211> 125
 <212> PRT
 <213> Eucalyptus grandis

<400> 2135
 Glu Asn Val Ala Ser Gly Ser Thr Glu Arg Pro Arg Ile Arg His Gln
 1 5 10 15
 His Ser Gln Ser Met Asp Gly Ser Thr Ser Ile Lys Pro Glu Met Leu
 20 25 30
 Met Ser Gly Ser Glu Asp Ala Ser Ala Ala Asp Ala Lys Lys Ala Met
 35 40 45
 Ser Ala Ala Lys Leu Ala Glu Leu Ala Leu Ile Asp Pro Lys Arg Ala
 50 55 60
 Lys Arg Ile Trp Ala Asn Arg Gln Ser Ala Ala Arg Ser Lys Glu Arg
 65 70 75 80
 Lys Met Arg Tyr Ile Ala Glu Leu Glu Arg Lys Val Gln Thr Leu Gln
 85 90 95
 Thr Glu Ala Thr Thr Leu Ser Ala Gln Leu Thr Leu Leu Gln Arg Asp
 100 105 110
 Thr Asn Gly Leu Thr Ala Glu Asn Ser Glu Leu Lys Leu
 115 120 125

<210> 2136
 <211> 72
 <212> PRT
 <213> Eucalyptus grandis

<400> 2136
 Met Ala Asp Ser Glu His Ser Ser Ser Asp Asp Thr Tyr Val Asp Ser
 1 5 10 15
 Arg Glu Glu Thr Ser Glu Glu Ser Lys Leu Asp Phe Ser Glu Asp Glu
 20 25 30
 Glu Thr Leu Val Ile Arg Met Tyr Asn Leu Val Gly Glu Arg Trp Ser
 35 40 45
 Leu Ile Ala Gly Arg Ile Pro Gly Arg Thr Ala Glu Glu Ile Glu Lys
 50 55 60
 Tyr Trp Asn Ser Arg Tyr Ser Thr
 65 70

<210> 2137
 <211> 135
 <212> PRT
 <213> Eucalyptus grandis

<400> 2137
 Met Ala Gly Glu Glu Pro Tyr Ser Ala Asp Thr Asn Ser Asp Thr Phe
 1 5 10 15
 Ala Asp Glu Glu Thr Leu Ile Pro Ser Ser Ser Glu Ala Leu Glu Ser
 20 25 30
 Ala Trp Val Pro Thr Ser Ser Thr Ala His His Gly Ser Lys Ser Val
 35 40 45
 Val Asn Phe Glu Asp Val Cys Gly Gly Asp Thr Asn Thr Ala Pro
 50 55 60
 Arg Pro Tyr Leu Arg Gln Ile Asp Leu Lys Glu Glu Ala Val Glu Glu
 65 70 75 80
 Asp Tyr Gly Asp Gly Asn Phe Gln Pro Pro Gly Lys Lys Arg Arg Leu
 85 90 95
 Ser Ala Asp Gln Val His Phe Leu Glu Arg His Phe Glu Val Glu Asn
 100 105 110
 Lys Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu
 115 120 125
 Gln Pro Arg Gln Val Ala Ile
 130 135

<210> 2138
 <211> 123
 <212> PRT
 <213> Eucalyptus grandis

<400> 2138
 Asp Thr Glu Asp Ser Lys Lys Lys Glu Arg His Ile Val Thr Trp Ser
 1 5 10 15
 Gln Glu Glu Asp Asp Ile Leu Arg Glu Gln Ile Gly Ile His Gly Thr
 20 25 30
 Glu Asn Trp Ser Ile Ile Ala Ser Lys Phe Lys Asp Lys Thr Thr Arg
 35 40 45
 Gln Cys Arg Arg Arg Trp Tyr Thr Tyr Leu Asn Ser Asp Phe Lys Lys
 50 55 60
 Gly Gly Trp Ser Pro Glu Glu Asp Val Leu Leu Cys Glu Ala Gln Lys
 65 70 75 80
 Ile Phe Gly Asn Arg Trp Thr Glu Ile Ala Lys Val Val Ser Gly Arg
 85 90 95
 Thr Asp Asn Ala Val Lys Asn Arg Phe Thr Thr Leu Cys Lys Lys Arg
 100 105 110
 Ala Arg Tyr Glu Ala Leu Ala Lys Glu Asn Thr
 115 120

<210> 2139
 <211> 126
 <212> PRT
 <213> Eucalyptus grandis

<400> 2139
 Met Gly Arg Gln Pro Cys Cys Asp Lys Leu Gly Val Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Ala Glu Glu Asp Arg Lys Leu Val Asn Phe Ile Leu Thr His
 20 25 30
 Gly Gln Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Leu Leu Asn Glu Ala Glu Glu Ser Leu Val Ile Asp
 65 70 75 80
 Leu His Ala Thr Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala Arg Leu

				85						90					95				
Pro	Gly	Arg	Thr	Asp	Asn	Glu	Ile	Lys	Asn	His	Trp	Asn	Thr	His	Ile				
				100				105						110					
Lys	Lys	Lys	Leu	Ile	Arg	Met	Gly	Ile	Asp	Pro	Val	Thr	His						
			115				120						125						

<210> 2140
 <211> 108
 <212> PRT
 <213> Eucalyptus grandis

Pro	Gly	Ser	Arg	Ser	Ser	Asn	Arg	Arg	Val	Glu	Arg	Lys	Lys	Gly	Asn				
1				5					10					15					
Pro	Trp	Thr	Glu	Glu	His	Arg	Arg	Arg	Phe	Leu	Ile	Gly	Leu	Gln	Lys				
			20				25						30						
Leu	Gly	Lys	Gly	Asp	Trp	Arg	Gly	Ile	Ala	Arg	Asp	Phe	Val	Thr	Thr				
			35				40						45						
Arg	Thr	Pro	Thr	Gln	Val	Ala	Ser	His	Ala	Gln	Lys	Tyr	Tyr	Ile	Arg				
			50				55				60								
Gln	Ser	Asn	Ala	Gly	Arg	Arg	Lys	Arg	Arg	Ser	Ser	Leu	Phe	Asp	Met				
65				70					75					80					
Ala	Pro	Asp	Met	Val	Cys	Leu	Leu	Tyr	Asp	Val	Ala	Ser	Ala	His	Ser				
			85						90					95					
Leu	His	Ser	Val	Gln	Ile	Ser	Gly	Ser	Cys	Met	Phe								
			100					105											

<210> 2141
 <211> 109
 <212> PRT
 <213> Eucalyptus grandis

Met	Arg	Lys	Pro	Cys	Cys	Asp	Lys	Gln	Asp	Thr	Asn	Lys	Gly	Ala	Trp				
1				5				10						15					
Ser	Lys	Gln	Glu	Asp	Gln	Lys	Leu	Ile	Asp	Tyr	Ile	Arg	Lys	His	Gly				
			20					25					30						
Glu	Gly	Cys	Trp	Arg	Thr	Leu	Pro	Lys	Ala	Ala	Gly	Leu	Leu	Arg	Cys				
			35				40						45						
Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile	Asn	Tyr	Leu	Arg	Pro	Asp	Leu				
			50				55				60								
Lys	Arg	Gly	Asn	Phe	Ala	Glu	Asp	Glu	Glu	Asp	Leu	Ile	Ile	Lys	Leu				
65				70					75					80					
His	Ala	Leu	Leu	Gly	Asn	Arg	Trp	Ser	Leu	Ile	Ala	Gly	Arg	Leu	Pro				
			85						90					95					
Gly	Arg	Thr	Asp	Asn	Glu	Val	Lys	Asn	Tyr	Trp	Asn	Ser							
			100					105											

<210> 2142
 <211> 65
 <212> PRT
 <213> Eucalyptus grandis

Ser	Pro	Glu	Glu	Asp	Glu	Lys	Leu	Phe	Asn	Tyr	Ile	Thr	Arg	Phe	Gly				
1				5				10						15					
Val	Gly	Cys	Trp	Ser	Ser	Val	Pro	Lys	Leu	Ala	Gly	Leu	Gln	Arg	Cys				
			20					25					30						
Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile	Asn	Tyr	Leu	Arg	Pro	Asp	Leu				
			35				40						45						
Lys	Arg	Gly	Met	Phe	Ser	Gln	Glu	Glu	Glu	Asp	Leu	Ile	Val	Ser	Leu				

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50
His
65
    <210> 2143
    <211> 121
    <212> PRT
    <213> Pinus radiata

    <400> 2143
Ala Lys Ser Tyr Leu Gly Ser Leu Thr Glu Thr Ile Gln Ser Leu Asn
1      5      10      15
Ala Glu Leu Glu Arg Thr Arg Ser Glu Leu Val Glu Ala Lys Arg
20      25      30
Glu Glu Glu Ile Ile Ser Lys Glu Ala Glu Arg Val Glu Lys Asn Lys
35      40      45
Arg Glu Val Glu Asn Leu Glu Leu Asn Leu Leu Gln Thr Thr Ala Glu
50      55      60
Ala Gly Arg Ala Lys Leu Glu Leu Glu Thr Ala Tyr Glu Glu Val Gln
65      70      75      80
Ser Ala Arg Leu Glu Thr Ala Gln Leu Arg Ala Ala Leu Glu Ala Thr
85      90      95
Glu Gly Lys Phe Glu Ala Met Leu Ser Glu Thr Arg Leu Glu Ala Glu
100      105      110
His Val Lys Gly Ala Ile Glu Lys Tyr
115      120

    <210> 2144
    <211> 71
    <212> PRT
    <213> Pinus radiata

    <400> 2144
Glu Ile Leu Val Thr Gln Ile Glu Gln Leu Gln Arg Lys Glu Arg Met
1      5      10      15
Phe Ser Glu Glu Asn Asn Phe Leu Arg Lys Arg Ile Val Asp Pro His
20      25      30
Ser Val Leu Thr Thr Pro Ala Ser Gly Ser Gly Ser Leu Gln Arg Ser
35      40      45
Glu Val Glu Thr Gln Leu Val Met Arg Pro Pro Ser Ser Asn Ala Asp
50      55      60
Phe Leu Phe Asn Ser Ser His
65      70

    <210> 2145
    <211> 110
    <212> PRT
    <213> Pinus radiata

    <400> 2145
Ser Leu Val Trp Gly Ala Leu Lys Met Gly Lys Thr Lys Met Glu Ile
1      5      10      15
Lys Arg Ile Gln Asn Pro Ser Arg Arg Gln Val Thr Phe Ser Lys Arg
20      25      30
Lys Asn Gly Leu Leu Lys Lys Ala Phe Glu Leu Ser Val Leu Cys Asp
35      40      45
Ala Glu Val Ala Leu Ile Ile Phe Ser Glu Thr Gly Lys Ile Cys Glu
50      55      60
Phe Ala Ser His Asp Asp Met Ala Thr Ile Leu Glu Lys Tyr Arg Ile
65      70      75      80
Tyr Thr Glu Thr His Gly Asn Met Glu Ser Ser Ser Val Gln Ser Val
85      90      95

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85 90 95
 Lys Ile Gly Glu Ser Gln Leu Lys Ala Leu Arg Glu Lys Met
 100 105 110

<210> 2146
 <211> 50
 <212> PRT
 <213> Pinus radiata

<400> 2146
 Leu Arg Gly Ala Asn Gly Cys Thr Ile Pro Ser Ile Gly Leu Thr Ser
 1 5 10 15
 Ile Glu Arg Val Glu Val Gln Thr Gln Leu Val Met Arg Pro His
 20 25 30
 Ala Thr Glu Met Asp Asp Asn Phe Met Asp Val Asp Asn Val Pro Leu
 35 40 45
 Ser Gly
 50

<210> 2147
 <211> 168
 <212> PRT
 <213> Pinus radiata

<400> 2147
 Glu Asp Gly Ser Leu Val Ile Cys Glu Arg Ser Leu Ser Ala Ala Gln
 1 5 10 15
 Gly Met Pro Met Val Ser Gln Ser Gln Ser Phe Val His Gly Glu Leu
 20 25 30
 Leu Ser Ser Gly Tyr Leu Ile Arg Pro Cys Glu Gly Arg Gly Ala Leu
 35 40 45
 Val Ile Met Val Asp His Arg Asn Leu Glu Ala Ser Ser Val Pro Glu
 50 55 60
 Ala Leu Arg Pro Leu Tyr Glu Ser Ser Thr Phe Phe Ala Gln Lys Met
 65 70 75 80
 Thr Val Glu Ala Ser Tyr His Leu Gln Gly Lys Val Gln Pro Glu Met
 85 90 95
 Ile Ser Leu Ser Lys Lys Leu Gln Gln Pro Cys Asn Val Arg Ser Tyr
 100 105 110
 Ser Gln Arg Leu Cys Arg Gly Phe Asn Glu Ala Val Asn Thr Leu Pro
 115 120 125
 Asp Asp Gly Trp Met Ser Leu Ser Lys Asp Gly Leu Gly Asp Val Thr
 130 135 140
 Ile Cys Glu Ser Phe Val Lys Leu Pro Glu Pro Asn Ala Ser Gln Ile
 145 150 155 160
 Ala Tyr Val Asn Ser Met Gly Thr
 165

<210> 2148
 <211> 120
 <212> PRT
 <213> Pinus radiata

<400> 2148
 Glu Asn Glu Ser Leu Arg Ala Arg Leu Arg His Met Asn Gly Asp Asp
 1 5 10 15
 Ile Asn Ser Leu Lys Leu Pro Glu Leu Phe His Leu Glu Gln Leu
 20 25 30
 Glu Thr Ala Ala Thr Gln Val Arg Arg Lys Asp Gln Val Leu Asp
 35 40 45
 Asn Glu Lys Ile Lys Arg Arg Asn Lys Met Arg Arg Lys Glu Asp Glu

```

      50              55              60
Asn Ile Ile Leu His Glu Met Leu Asp Gln His His Gly Gln Met Glu
65              70              75              80
Glu Asp Asn Ala Gln Ile Asn Phe Leu Phe Cys Gln Pro Leu Asn Arg
      85              90              95
Ser Asp Thr Thr Phe Pro Ala Ser Leu Leu Arg Leu Gln Pro Asn Gln
      100              105              110
Pro Asn Leu Gln Asp Ile Gly Tyr
      115              120

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<210> 2149
<211> 165
<212> PRT
<213> Pinus radiata

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<400> 2149
Ser Pro Gln Val Glu His Arg Pro Phe Ser Pro His Glu Asp Ala Thr
1              5              10              15
Ile Ile Gln Ala His Ala Arg His Gly Asn Lys Trp Ala Thr Ile Ala
      20              25              30
Arg Leu Leu Pro Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn
      35              40              45
Ser Thr Leu Arg Arg Arg Tyr His Gly Glu Lys Asp Gln Ser Asn Gly
      50              55              60
Leu Ala Val Asn Leu Glu Ser Ala Ala Glu Asp Lys Glu Thr Met Thr
      65              70              75              80
Pro Met Thr Pro Val Thr Ala Thr Ala Thr Ala Thr Ala Met
      85              90              95
Pro Val Ala Leu Val Phe Pro Thr Ala Ala Asp Asn Val Arg Lys Arg
      100              105              110
Ser Asn Ser Ser Cys Ser Ala Asn Asp Asn Pro Gly Asp Ala Glu Val
      115              120              125
Glu Ser Cys Arg Leu Lys Arg Leu Asn Phe Ser Glu Ser Pro Ser Ser
      130              135              140
Ser Glu Asn Ile Asn Asn Asn Asn Glu Glu Ala Val Ser Gly
      145              150              155              160
His Cys Asn Ser Ala
      165

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<210> 2150
<211> 68
<212> PRT
<213> Pinus radiata

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<400> 2150
Met Gly Arg Gly Pro Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Asn
1              5              10              15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Lys Lys Ala
      20              25              30
Ser Glu Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe
      35              40              45
Ser Asn Lys Gly Lys Leu Tyr Glu Phe Ser Ser Ser Ser Met Thr Lys
      50              55              60
Ile Leu Glu Arg
65

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<210> 2151
<211> 152
<212> PRT
<213> Pinus radiata

```

<400> 2151
 Gln Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile
 1 5 10 15
 Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Thr Phe Ser Pro Gln Glu
 20 25 30
 Glu Asn Leu Ile Val Glu Leu His Ser Val Leu Gly Asn Arg Trp Ser
 35 40 45
 Gln Ile Ala Thr His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn
 50 55 60
 Leu Trp Asn Ser Cys Ile Lys Lys Lys Leu Arg Gln Arg Gly Ile Asp
 65 70 75 80
 Pro Asn Thr His Arg Pro Leu Ser Glu Val Asn Ala Glu Ala Gly Asp
 85 90 95
 Ser Lys Asn Asp Asn Ser Asn Lys Glu Val Glu Thr Gln Ala Ala Met
 100 105 110
 Asp Glu Ser His Val Ser Ala Gly Asn Glu Phe Lys His Leu Asn Ala
 115 120 125
 Ile Pro Arg Ala Asp Thr Ala Asn Pro Lys Phe Phe His Val Pro Val
 130 135 140
 Glu Asp Asn Thr Leu Ile Ala Ser
 145 150

<210> 2152
 <211> 89
 <212> PRT
 <213> Pinus radiata

<400> 2152
 Met Arg Cys Thr Arg Trp Gln Gly Leu Pro Phe Ser Ser Lys Pro Lys
 1 5 10 15
 Val Lys Lys Gly Leu Trp Ser Pro Glu Glu Asp Glu Lys Leu Ile Asn
 20 25 30
 Tyr Met Met Lys Asn Gly Leu Leu Gly Cys Ser Trp Ser Tyr Val Ala
 35 40 45
 Lys Gln Ile Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp
 50 55 60
 Thr Asn Tyr Leu Arg Pro Gly Leu Lys Arg Gly Ala Ile Ser Pro Glu
 65 70 75 80
 Glu Glu Gln Leu Ile Ile His Leu Gln
 85

<210> 2153
 <211> 94
 <212> PRT
 <213> Pinus radiata

<400> 2153
 Met Gly Arg Ala Pro Cys Cys Asp Lys Ala Asn Val Lys Lys Gly Pro
 1 5 10 15
 Trp Ser Pro Glu Glu Asp Thr Lys Leu Lys Ala Phe Ile Glu Gln His
 20 25 30
 Gly Thr Gly Gly Asn Trp Ile Ala Leu Pro Gln Lys Ala Gly Leu Lys
 35 40 45
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro
 50 55 60
 Asp Ile Arg His Gly Gly Phe Ser Glu Asp Glu Asp Asn Ile Ile Cys
 65 70 75 80
 Ser Leu Tyr Ala Ser Ile Gly Ser Met Val Ser Ile Ile Ala
 85 90

<210> 2154

<211> 217
 <212> PRT
 <213> Pinus radiata

<400> 2154
 Met Val Arg Gly Lys Thr Gln Met Lys Arg Ile Glu Asn Asp Thr Ser
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Ile Ile Phe
 35 40 45
 Ser Pro Arg Gly Lys Leu Tyr Glu Phe Ala Ser Pro Ser Met Glu Glu
 50 55 60
 Ile Leu Glu Lys Tyr Lys Lys Arg Ser Lys Glu Asn Gly Met Ala Gln
 65 70 75 80
 Thr Thr Lys Glu Gln Asp Thr Gln Tyr Ser Lys His Ser Lys Gln Lys
 85 90 95
 Leu Ala Asn Met Glu Glu Gln Ile Arg Ile Leu Glu Ser Thr Gln Arg
 100 105 110
 Lys Met Leu Gly Glu Gly Leu Glu Ser Cys Ser Met Ala Glu Leu Asn
 115 120 125
 Lys Leu Glu Ser Gln Ala Glu Arg Gly Leu Ser His Ile Arg Ala Arg
 130 135 140
 Lys Thr Glu Ile Leu Val Asp Gln Ile Glu Cys Leu Lys Arg Lys Glu
 145 150 155 160
 Arg Leu Leu Ser Glu Glu Asn Ala Leu Leu Ser Arg Lys Trp Val Asp
 165 170 175
 Arg Gln Ser Val Asp Gly Ser Gly Ser Thr Ser Ser Ser Ile Gly Leu
 180 185 190
 Gly Ser Ile Glu Gln Ile Glu Val Glu Thr Gln Leu Val Ile Arg Pro
 195 200 205
 Pro Asn Ala Gln Asp His Cys Ser Val
 210 215

<210> 2155
 <211> 113
 <212> PRT
 <213> Pinus radiata

<400> 2155
 Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Thr Phe Ser Gln Arg
 1 5 10 15
 Leu Cys Lys Gly Phe Asn Glu Ala Val Asn Gly Phe Thr Asp Asp Gly
 20 25 30
 Trp Ser Leu Met Gly Asn Asp Gly Met Glu Asp Val Thr Ile Leu Val
 35 40 45
 Asn Ser Ser Pro Ser Lys Leu Phe Gly Gln Gln Phe Ala Ser Ser Asp
 50 55 60
 Gly Leu Pro Ala Leu Gly Gly Gly Ile Leu Cys Ala Lys Ala Ser Met
 65 70 75 80
 Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg Glu
 85 90 95
 His Arg Ser Glu Trp Ala Asp Ser Asn Ile Asp Ala Tyr Ser Ala Ala
 100 105 110
 Ser

<210> 2156
 <211> 107
 <212> PRT
 <213> Pinus radiata

<400> 2156

```

Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1      5      10      15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
 20      25      30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
 35      40      45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50      55      60
Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile Ile Lys
 65      70      75      80
Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85      90      95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
100      105

```

<210> 2157

<211> 124

<212> PRT

<213> Pinus radiata

<400> 2157

```

Leu Trp Leu Arg Phe Ser Gly Met Asp Arg Ser Asn Ser Ala Thr Gly
 1      5      10      15
Glu Glu Asp Val Leu Ser Arg Cys Arg Glu Arg Lys Arg Phe Met Lys
 20      25      30
Leu Ala Ile Glu Asn Arg Tyr Lys Leu Ala Thr Ala His Val Ala Tyr
 35      40      45
Met Asp Ser Leu Arg Arg Met Gly Thr Gly Leu Arg Leu Phe Ala Glu
 50      55      60
Gly Glu Thr Met Ser Glu Ser Ser Tyr Ser Thr Ser Pro Ile Gly Thr
 65      70      75      80
Ser Glu Leu Ala Val Val Leu Pro Glu Lys Ser Val Ser Pro Ser Pro
 85      90      95
Phe Pro Ser Ser Ser Pro Ser Leu Ser Gln Pro Gln Ser Pro Arg Ser
100      105      110
Glu Arg Ala Glu Ser Arg Ser Pro Leu Asp Ser Phe
115      120

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<210> 2158

<211> 110

<212> PRT

<213> Pinus radiata

<400> 2158

```

Asp Gly Leu Val Gln Asn Ser Arg Glu Arg Lys Lys Gly Val Pro Trp
 1      5      10      15
Thr Glu Glu Glu His Lys Met Phe Leu Leu Gly Leu His Lys Leu Gly
 20      25      30
Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn Phe Val Thr Ser Arg Thr
 35      40      45
Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg Gln Ser
 50      55      60
Asn Leu Asn Lys Arg Lys Arg Arg Ser Ser Leu Phe Asp Ile Ser Thr
 65      70      75      80
Asp Ser Met Glu Asp Cys Tyr Gln Gly Ile Pro Glu Leu Ser Pro Val
 85      90      95
Met His Asp Leu Ser Leu Gly Gln Asn Ser Ser Leu Thr Ser
100      105      110

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<210> 2159
 <211> 175
 <212> PRT
 <213> Pinus radiata

<400> 2159
 Ser Ser Pro Val Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp Ser Pro
 1 5 10 15
 Glu Glu Asp Asp Lys Leu Ile Asn Tyr Met Met Lys Asn Gly Gln Gly
 20 25 30
 Cys Trp Ser Ser Asp Val Ala Lys Gln Ala Gly Leu Gln Arg Cys Gly Lys
 35 40 45
 Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg
 50 55 60
 Gly Ala Phe Ser Pro Gln Glu Glu Gln Leu Ile Ile His Leu His Ser
 65 70 75 80
 Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala Arg Leu Pro Gly Arg
 85 90 95
 Thr Asp Asn Glu Ile Lys Asn Phe Trp Asn Ser Cys Ile Lys Lys Lys
 100 105 110
 Leu Lys His Leu Ser Ala Ser Thr Asn Asn Ser Lys Ser Ile Ser Ala
 115 120 125
 Pro Asn Arg Thr Ser Thr Met Asn Ser Ser Ile Thr Pro Phe Ser Glu
 130 135 140
 Ser Ser Ala Glu Pro Leu Glu Val Met Ala Thr Arg Tyr Gln Pro Ser
 145 150 155 160
 Asn Ala Phe Asn His Glu Val Pro Thr Ala Glu Asn Gln Val Leu
 165 170 175

<210> 2160
 <211> 78
 <212> PRT
 <213> Pinus radiata

<400> 2160
 Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Leu Ala Tyr Ile Gln Glu His
 20 25 30
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp
 50 55 60
 Ile Lys Arg Gly Lys Phe Asn Pro Gln Glu Glu Gln Thr Ile
 65 70 75

<210> 2161
 <211> 159
 <212> PRT
 <213> Pinus radiata

<400> 2161
 Arg Thr Pro Arg Cys Asp Gln Met Gly Leu Lys Lys Gly Pro Trp Thr
 1 5 10 15
 Pro Glu Glu Asp Gln Ile Leu Ile Ser Tyr Ile Asn Lys His Gly His
 20 25 30
 Gly Asn Trp Arg Ala Leu Pro Lys Gln Ala Gly Leu Met Arg Cys Gly
 35 40 45
 Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Ile Lys
 50 55 60
 Arg Gly Asn Phe Ser Leu Lys Glu Glu Gln Thr Ile Ile His Leu His

65				70				75				80			
Gln	Ile	Leu	Gly	Asn	Arg	Trp	Ser	Ala	Ile	Ala	Ser	His	Leu	Pro	Gly
				85					90					95	
Arg	Thr	Asp	Asn	Glu	Ile	Lys	Asn	Val	Trp	Asn	Thr	His	Leu	Lys	Lys
			100					105					110		
Arg	Leu	Leu	Gln	Ile	Gly	Val	Asp	Pro	Val	Thr	His	Ala	Pro	Arg	Gly
		115					120					125			
Tyr	Asn	Val	Ser	Asn	Cys	Tyr	Thr	Ala	Val	Asn	Ile	Arg	Asp	His	His
	130					135					140				
Gly	Glu	Gln	Ala	Asp	His	Gln	Leu	Gln	Ser	His	Val	Cys	Val	Ser	
145					150					155					

<210> 2162

<211> 49

<212> PRT

<213> Pinus radiata

<400> 2162

Thr	Pro	Glu	Glu	Asp	Arg	Ile	Leu	Ile	Ser	Tyr	Ile	Lys	Arg	Asn	Gly
1				5				10						15	
His	Gly	Lys	Trp	Leu	Ala	Leu	Pro	Lys	Gln	Ala	Gly	Leu	Ser	Arg	Cys
			20					25				30			
Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Thr	Asn	Tyr	Leu	Arg	Pro	Asn	Ile
		35					40					45			

Lys

<210> 2163

<211> 78

<212> PRT

<213> Pinus radiata

<400> 2163

Met	Gly	Thr	Gly	Glu	Glu	Ala	Thr	Pro	Thr	Lys	Pro	Ala	Ala	Lys	Pro
1				5				10						15	
Ser	Ser	Ser	Ser	Gln	Glu	Thr	Pro	Thr	Thr	Pro	Val	Tyr	Pro	Asp	Trp
			20					25					30		
Ala	Ala	Ala	Phe	Gln	Ala	Tyr	Tyr	Gly	Pro	Gly	Ala	Thr	Pro	Pro	Pro
		35					40					45			
Pro	Ala	Phe	Phe	Ala	Ser	Thr	Val	Gly	Ser	Ala	Pro	Thr	Pro	His	Pro
	50					55					60				
Tyr	Met	Trp	Gly	Gly	Gln	Pro	Leu	Met	Pro	Pro	Tyr	Gly	Thr		
65					70					75					

<210> 2164

<211> 113

<212> PRT

<213> Pinus radiata

<400> 2164

Met	Gly	Arg	Gly	Lys	Ile	Glu	Ile	Lys	Lys	Ile	Asp	Asp	Val	Thr	Ser
1				5				10						15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Lys	Met	Gly	Ile	Phe	Lys	Lys	Ala
		20						25					30		
His	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Val	Leu	Ile	Phe
		35					40					45			
Ser	Asn	Thr	Gly	Arg	Leu	Tyr	Asp	Tyr	Ala	Ser	Ser	Arg	Cys	Met	Glu
	50					55					60				
Arg	Thr	Ile	Glu	Arg	Tyr	Glu	Lys	Cys	Thr	Lys	Ala	Ile	Asn	Cys	Pro
65					70					75				80	
Thr	Ser	Asp	Pro	Ile	Val	Glu	Asn	Lys	Ser	Pro	Ile	Gln	Glu	Gly	Ile

85 90 95
Glu Ile Leu Arg Gln Lys Leu Arg Ala Leu Gln Arg Leu Gln Arg Asn
 100 105 110
Leu

```
<210> 2165
<211> 107
<212> PRT
<213> Pinus radiata
```

<400> 2165																	
1	Trp	Lys	Ala	Ala	Ile	5	Lys	Arg	Leu	Gln	Ser	Gln	Ile	Met	Val	Ala	Phe
	Gln	Ala	Val	Asp	Thr	Thr	Ser	Ala	Ala	Ile	Leu	Lys	Leu	Arg	Glu	Asp	
				20					25						30		
	Glu	Leu	Tyr	Pro	Gln	Leu	Val	Glu	Leu	Ser	Lys	Gly	Leu	Met	Gln	Met	
			35					40					45				
	Trp	Arg	Ala	Met	Tyr	Glu	Cys	His	Gln	Val	Gln	Asn	His	Ile	Val	Gln	
		50					55					60					
	Gln	Val	Arg	His	Leu	Gly	Asn	Leu	Ala	Ser	Ala	Glu	Ala	Thr	Ser	Ser	
		65				70					75					80	
	Tyr	His	Gln	Gln	Ala	Thr	Ile	Gln	Leu	Glu	Ala	Gln	Val	Thr	Ala	Trp	
				85						90						95	
	Tyr	Asp	Ser	Phe	Cys	Arg	Met	Ile	Thr	Ser	Gln						
			100						105								

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<210> 2166
<211> 38
<212> PRT
<213> Pinus radiata
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```
<400> 2166
Met Gly Ala Pro Lys Gln Lys Trp Thr Ser Glu Glu Glu Gly Ala Leu
1      5      10     15
Arg Ala Gly Val Glu Lys Tyr Gly Ala Gly Lys Trp Gln Thr Ile Leu
20    25    30
Lys Asp Pro Glu Phe Ala
35
```

```
<210> 2167
<211> 158
<212> PRT
<213> Pinus radiata
```

<400> 2167																	
Ser	Gly	His	Met	Asp	5	Gly	Gly	Ser	Gly	Glu	Asp	Gln	Asp	Ala	Ala	Asp	
1										10					15		
Gln	Asp	His	Asp	His	Asp	His	Asp	His	Asp	His	Glu	Gln	Gln	Gln	Gln	Thr	
			20					25						30			
Arg	Arg	Lys	Arg	Tyr	His	Arg	His	Thr	Ala	Arg	Gln	Ile	Gln	Glu	Met		
		35					40					45					
Glu	Ala	Leu	Phe	Lys	Glu	Cys	Pro	His	Pro	Asp	Asp	Lys	Gln	Arg	Gln		
	50					55				60							
Arg	Leu	Ser	Ile	Glu	Leu	Gly	Leu	Lys	Pro	Arg	Gln	Val	Lys	Phe	Trp		
	65				70					75					80		
Phe	Gln	Asn	Arg	Arg	Thr	Gln	Met	Lys	Ala	Gln	Gln	Asp	Arg	Ser	Asp		
			85					90					95				
Asn	Ala	Ile	Leu	Arg	Ala	Glu	Asn	Glu	Asn	Leu	Arg	Asn	Glu	Asn	Val		
			100					105					110				
Ala	Leu	Arg	Glu	Ala	Ile	Lys	Asn	Gly	Ala	Cys	Pro	Asn	Cys	Gly	Gly		

		115					120					125							
Ser	Thr	Ser	Leu	Gly	Glu	Met	Pro	Gly	Phe	Asp	Glu	His	His	Phe	Arg				
		130					135					140							
Ile	Glu	Asn	Thr	Arg	Leu	Lys	Glu	Glu	Leu	Asp	Arg	Val	Ser						
		145				150					155								

```
<210> 2168
<211> 122
<212> PRT
<213> Pinus radiata
```

[illegible]

```
<210> 2169
<211> 101
<212> PRT
<213> Pinus radiata
```

[illegible]

```
<210> 2170
<211> 133
<212> PRT
<213> Pinus radiata
```

<u><400> 2170</u>																	
Arg	Leu	Leu	Pro	Gly	Arg	Thr	Asp	Asn	Ala	Ile	Lys	Asn	His	Trp	Asn		
1				5					10					15			
Ser	Thr	Leu	Arg	Arg	Arg	Tyr	His	Gly	Glu	Lys	Asp	Gln	Ser	Asn	Gly		
			20					25					30				
Leu	Ala	Val	Asn	Leu	Glu	Ser	Ala	Ala	Glu	Asp	Lys	Glu	Thr	Met	Thr		

```

      35              40              45
Pro Met Thr Pro Val Thr Ala Thr Ala Thr Ala Thr Ala Met
50              55              60
Pro Val Ala Leu Val Phe Pro Thr Ala Ala Asp Asn Val Arg Lys Arg
65              70              75              80
Ser Asn Ser Ser Cys Ser Ala Asn Asp Asn Pro Gly Asp Ala Glu Val
      85              90              95
Glu Ser Cys Arg Leu Lys Arg Leu Asn Phe Ser Glu Ser Pro Ser Ser
100              105              110
Ser Glu Asn Ile Asn Asn Asn Asn Asn Glu Glu Ala Val Ser Gly
115              120              125
His Cys Asn Ser Ala
130

```

<210> 2171

<211> 120

<212> PRT

<213> Pinus radiata

```

      <400> 2171
Met Arg Cys Lys Thr Gly Gln Ala Gln Gly Val Leu Glu Val Glu Gly
1              5              10              15
Thr His Pro Ala Pro Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp Ser
20              25              30
Pro Val Glu Asp Asn Gln Leu Thr Asn Tyr Ile Leu Arg Arg Gly Leu
35              40              45
Val Gly Cys Trp Asn Tyr Val Ala Lys Gln Ala Gly Leu Gln Arg Thr
50              55              60
Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Gly Leu
65              70              75              80
Lys Arg His Pro Ile Ser Arg Gln Glu Glu Gln Leu Ile Ile Glu Leu
      85              90              95
Gln Ser Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala Gln Leu Pro
100              105              110
Gly Arg Thr Asp Ile Glu Ile Lys
115              120

```

<210> 2172

<211> 155

<212> PRT

<213> Pinus radiata

```

      <400> 2172
Gln Gln Leu Glu Ser Ser Arg Ile Lys Leu Lys Gln Ile Glu Gln Glu
1              5              10              15
Leu Glu Arg Val Lys Gln Gln Gly Ile Ser Ile Asn Gly His Leu Gly
20              25              30
Asp His Asn Gly Ser Gly Ala Ala Phe Asp Met Glu Tyr Gly Arg
35              40              45
Trp Val Glu Glu Gln Asn Arg Gln Ala Arg Glu Leu Arg Ala Ser Leu
50              55              60
Gln Ala His Leu Thr Asp Ser Glu Leu Cys Val Leu Val Asp Asn Ala
65              70              75              80
Ile Ala His Tyr Asp Glu Leu Phe Arg Met Lys Gly Ala Ala Ser Lys
      85              90              95
Leu Asp Val Phe His Leu Met Ser Gly Met Trp Lys Thr Pro Thr Glu
100              105              110
Arg Cys Phe Met Trp Met Gly Gly Phe Arg Pro Ser Glu Leu Leu Lys
115              120              125
Ile Leu Thr Pro Gln Ile Glu Pro Leu Thr Glu Gln Gln Ser Phe Ala
130              135              140

```

Val Ser Ser Leu Lys Leu Ser Ser Gln Gln Ala
 145 150 155

<210> 2173
 <211> 63
 <212> PRT
 <213> Pinus radiata

<400> 2173
 Met Val Arg Gly Lys Ile Gln Met Lys Arg Ile Glu Asn Thr Ala Ser
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Met Ile Phe
 35 40 45
 Ser Pro Gly Gly Lys Leu Tyr Glu Phe Ala Asn Thr Ser Met Glu
 50 55 60

<210> 2174
 <211> 76
 <212> PRT
 <213> Pinus radiata

<400> 2174
 Arg Ala Arg Lys Thr Glu Ile Leu Val Thr Glu Ile Glu Gln Leu Gln
 1 5 10 15
 Arg Lys Glu Trp Ile Leu Ser Glu Glu Asn Ala Phe Leu Gly Lys Lys
 20 25 30
 Phe Val His Pro His Ser Val Ser Lys Thr Pro Gly Ser Glu Ser Gly
 35 40 45
 Ser Ile Gln Asn Ser Glu Val Glu Thr Gln Leu Val Met Arg Pro Pro
 50 55 60
 Cys Thr Asn Ala His Phe Leu Ile Asn Ser Ser His
 65 70 75

<210> 2175
 <211> 161
 <212> PRT
 <213> Eucalyptus grandis

<400> 2175
 Arg Glu Ser Ala Asn Cys Ala Ser Arg Val Ala Asp Arg Arg Glu Asn
 1 5 10 15
 Arg Arg Arg Arg Asp Met Gly Asn Gln Lys Leu Lys Trp Thr Lys Glu
 20 25 30
 Glu Glu Glu Ala Leu Leu Ala Gly Ile Ala Lys His Gly Ala Gly Lys
 35 40 45
 Trp Lys Asn Ile Leu Lys Asp Pro Glu Phe Ala Pro Ala Leu Val Asn
 50 55 60
 Arg Ser Asn Ile Asp Leu Lys Asp Lys Trp Arg Asn Leu Ser Val Gly
 65 70 75 80
 Thr Ser Gly Gln Gly Ser Arg Asp Lys Gln Arg Leu Ser Lys Val Lys
 85 90 95
 Ser Leu Met Ala Ala Pro Gln Ser Ser Thr Val Pro Leu Asn Pro Gln
 100 105 110
 Ala His Ala Ala Ser Thr Asp Val Ala Leu Val Asn Ser Ser Asn Ser
 115 120 125
 Phe Gln Asp Gly Lys Asn Tyr Ser Leu Trp Val Ser Val Leu Leu Phe
 130 135 140
 Leu Phe Ser Asn Gly Asn Leu Phe Tyr Phe Tyr Pro Leu Leu Ser Phe
 145 150 155 160

Leu

<210> 2176
 <211> 31
 <212> PRT
 <213> Eucalyptus grandis

<400> 2176
 Thr Arg Gln Ser Ala Arg Ala Leu Leu Ala Ile His Asp Tyr Phe Ser
 1 5 10 15
 Arg Leu Arg Ala Leu Ser Ser Leu Trp Leu Ala Arg Pro Arg Glu
 20 25 30

<210> 2177
 <211> 191
 <212> PRT
 <213> Eucalyptus grandis

<400> 2177
 Met Ala Ser Arg Lys Glu Val Asp Arg Ile Lys Gly Pro Trp Ser Pro
 1 5 10 15
 Glu Glu Asp Glu Ala Leu Arg Leu Leu Val Gln Lys His Gly Pro Arg
 20 25 30
 Asn Trp Ser Leu Ile Ser Lys Ser Ile Pro Gly Arg Ser Gly Lys Ser
 35 40 45
 Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val Glu His Arg
 50 55 60
 Ala Phe Thr Pro Glu Glu Asp Asp Ile Ile Val Arg Ala His Ala Arg
 65 70 75 80
 Phe Gly Asn Lys Trp Ala Thr Ile Ala Arg Leu Leu Ser Gly Arg Thr
 85 90 95
 Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu Lys Arg Lys Cys
 100 105 110
 Ser Pro Pro Leu Ser Pro Leu Ala Glu Glu Gly Asn Asn Arg Ala Phe
 115 120 125
 Asp Ala Ala Ala Gly Tyr Asp Gly Asp Leu Ser Pro Arg Glu Arg Pro
 130 135 140
 Ala Lys Arg Ser Ala Ser Ala Gly Pro Cys Leu Ser Pro Gly Ser Pro
 145 150 155 160
 Ser Gly Ser Gly Met Ser Asp Ser Ser Val His Phe Val Tyr Arg Pro
 165 170 175
 Val Ala Lys Thr Gly Pro Val Val Pro Pro Thr Val Glu Ala Thr
 180 185 190

<210> 2178
 <211> 113
 <212> PRT
 <213> Eucalyptus grandis

<400> 2178
 Gln Val Ala Gln Leu Arg Val Glu Asn Ser Thr Leu Leu Lys Arg Leu
 1 5 10 15
 Ser Asp Ile Ser Gln Lys Tyr Asn Val Ala Ala Val Asp Asn Arg Val
 20 25 30
 Leu Lys Ala Asp Val Glu Thr Leu Arg Ala Lys Val Lys Met Ala Glu
 35 40 45
 Glu Thr Val Lys Arg Val Thr Gly Leu Asn Pro Met Leu His Val Met
 50 55 60
 Ser Asp Met Ser Ser Val Gly Val Pro Pro Phe Asp Gly Ser Pro Ser
 65 70 75 80

```

Asp Thr Ser Ala Asp Ala Ala Val Pro Val Arg Asp Asp Pro Lys His
      85
Gln Phe Tyr Gln Thr Asn Ser Ser Asn Pro Ala Ser Ser Ala Asp Asp
      100      105      110
Met

```

```

<210> 2179
<211> 314
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2179
Met Lys Arg Leu Gly Ser Ser Asp Ser Leu Gly Ala Leu Met Ser Ile
 1      5      10      15
Cys Pro Pro Ser Glu Glu Leu Gln His Ser Pro Arg Asn Gly Asn Pro
 20      25      30
Ile Tyr His Ser Arg Asp Leu Gln Ser Met Leu Glu Leu Gly Leu Asp
 35      40      45
Glu Glu Gly Cys Val Glu Asp Gln Ser Ala Gly Gly Gly His Val
 50      55      60
Gly Gly Glu Lys Lys Arg Arg Leu Ser Ile Asp Gln Val Lys Ala Leu
 65      70      75      80
Glu Lys Asn Phe Glu Val Glu Asn Lys Leu Glu Pro Glu Arg Lys Val
      85      90      95
Lys Leu Ala Gln Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Val Trp
 100      105      110
Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Leu Glu Arg Asp
 115      120      125
Tyr Gly Val Leu Lys Ser Ser Tyr Glu Ala Leu Lys Leu Ser Tyr Asp
 130      135      140
Ala Leu Lys His Asp Asn Glu Ala Leu His Lys Glu Ile Lys Glu Leu
 145      150      155      160
Lys Ser Lys Leu Arg Glu Glu Asp Asp Asn Pro Glu Ser Asn Leu Ser
      165      170      175
Val Lys Glu Glu Val Ile Ile Pro Gly His Asp Val Ser Asp Lys Ile
      180      185      190
Arg Ala Ala Asp Asp Gly Asp Asp Asp Thr Lys Arg Ser Pro Pro Pro
 195      200      205
Pro Ile Thr Ala Pro Pro Arg Glu Leu Ser Phe Asn Asn Gly Gly Leu
 210      215      220
Lys Asp Gly Ser Ser Asp Ser Asp Ser Ala Ile Val Asn Glu Glu
 225      230      235      240
Asn Ala Ala Thr Ser Ser Ser Ser Pro Asn Pro Ala Val Gln Ser His
      245      250      255
Gly Gly Phe Leu Lys Phe Met Gly Ser Ser Ser Ser Ala Ser Pro
 260      265      270
Pro Pro Ser Pro Pro Ala Ser Phe Gly Gly Cys Phe Ser Phe Gln Phe
 275      280      285
Gln Arg Ala Tyr Gln Pro Gln Pro Gln Pro Pro His His His His
 290      295      300
His Ser Pro Tyr Val Lys Met Glu Glu His
 305      310

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<210> 2180
<211> 94
<212> PRT
<213> Eucalyptus grandis

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<400> 2180
Glu Arg Tyr Lys Ser Ala Cys Ser Asp Ser Ser His Pro Gln Ser Val

```



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      1           5           10           15
Ser Asp Val Asn Thr Gln Phe Tyr Gln Gln Glu Ala Ser Lys Leu Arg
      20           25           30
Arg Gln Ile Arg Glu Ile Gln Val Ser Asp Arg His Leu Gly Glu
      35           40           45
Gly Ile Ser Asp Leu Ser Phe Lys Asp Leu Lys Asn Leu Glu Ser Lys
      50           55           60
Leu Glu Lys Ser Ile Ser Arg Val Arg Ser Lys Lys Asn Glu Met Leu
      65           70           75           80
Phe Ala Glu Ile Glu Tyr Met Gln Lys Arg Gly Leu Val Gln
      85           90

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<210> 2181

<211> 83

<212> PRT

<213> Eucalyptus grandis

<400> 2181

```

Glu Asn Lys Ile Asn Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly
      1           5           10           15
Leu Leu Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val
      20           25           30
Ala Leu Ile Ile Phe Ser Thr Arg Gly Lys Leu Tyr Glu Phe Cys Ser
      35           40           45
Ser Pro Ser Met Leu Lys Thr Leu Asp Arg Tyr Gln Lys Cys Ser Tyr
      50           55           60
Gly Ser Val Glu Val Asn Lys Pro Ser Lys Glu Leu Glu Asn Ala Tyr
      65           70           75           80
Arg Glu Tyr

```

<210> 2182

<211> 108

<212> PRT

<213> Eucalyptus grandis

<400> 2182

```

Met Gly Arg Gly Lys Ile Glu Ile Gln Lys Ile Glu Asn Asp Thr Asn
      1           5           10           15
Arg Gln Val Thr Tyr Ser Lys Arg Arg Asn Gly Ile Phe Lys Lys Ala
      20           25           30
His Glu Leu Thr Val Leu Cys Asp Ala Arg Val Ser Ile Leu Met Leu
      35           40           45
Ser Gly Asn Lys Lys Leu His Glu Tyr Ile Ser Pro Thr Thr Thr Thr
      50           55           60
Lys Arg Met Ile Asp Asp Tyr Gln Lys Ala Leu Gly Ile Asp Leu Trp
      65           70           75           80
Thr Thr His Tyr Asp Arg Met Gln Glu Glu Leu Arg Lys Leu Lys Glu
      85           90           95
Val Asn Asn Asn Phe Arg Lys Glu Ile Arg Gln Ile
      100           105

```

<210> 2183

<211> 40

<212> PRT

<213> Eucalyptus grandis

<400> 2183

```

Arg Asn Leu Met Gly Glu Asp Leu Gly Thr Leu Asn Ser Lys Glu Leu
      1           5           10           15
Glu Gln Leu Glu Arg Gln Leu Glu Ala Ser Leu Lys His Ile Arg Ser

```

20 25 30
 Thr Lys Thr Gln Cys Met Leu Asp
 35 40
 <210> 2184
 <211> 161
 <212> PRT
 <213> Eucalyptus grandis
 <400> 2184
 Met Val Phe Pro Thr Gln Ala Thr Pro Glu Glu Ser Pro Gln Arg Lys
 1 5 10 15
 Met Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn
 20 25 30
 Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 35 40 45
 Tyr Glu Leu Ser Val Leu Cys Glu Ala Glu Val Ala Leu Ile Val Phe
 50 55 60
 Ser Ser Arg Gly Arg Leu Tyr Glu Tyr Ala Asn Asp Ser Val Lys Ala
 65 70 75 80
 Thr Ile Glu Arg Tyr Lys Lys Ala Cys Ser Asp Ser Ser Ser Ser Gly
 85 90 95
 Ser Val Ser Glu Ala Asn Val Gln Phe Tyr Gln Gln Glu Ser Ala Lys
 100 105 110
 Leu Gln Gln Gln Ile Asn Asn Met Gln Asn Asn Asn Arg Gln Leu Val
 115 120 125
 Gly Asp Ser Ile Ala Gly Met Asn Met Lys Asp Met Lys Thr Thr Glu
 130 135 140
 Gln Lys Leu Glu Lys Ala Ile Ala Lys Ile Arg Ala Lys Lys Asn Ala
 145 150 155 160
 Ile

<210> 2185
 <211> 92
 <212> PRT
 <213> Eucalyptus grandis

<400> 2185
 Gln His Lys Glu Gln Met Leu Val Glu Ala Asn Arg Glu Leu Arg Lys
 1 5 10 15
 Lys Leu Glu Glu Ser Asn Thr Arg Ile Pro Leu Arg Leu Gly Trp Glu
 20 25 30
 Ala Glu Asp His Asn Asn Ile Ser Tyr Ser Arg Leu Pro Met Gln Ser
 35 40 45
 Gln Gly Leu Ile Phe Gln Pro Leu Gly Gly Asn Pro Thr Leu Gln Ile
 50 55 60
 Gly Tyr Asn Pro Ala Gly Ser Asn Glu Leu Asn Val Ser Ala Ala Asp
 65 70 75 80
 Gln His Pro Asn Gly Phe Ile Pro Gly Trp Met Leu
 85 90

<210> 2186
 <211> 113
 <212> PRT
 <213> Eucalyptus grandis

<400> 2186
 Gly Ser Lys Glu Leu Glu Ser Leu Glu Arg Gln Leu Asp Gly Ser Leu
 1 5 10 15
 Lys Gln Ile Arg Ser Arg Arg Thr Gln Tyr Met Leu Asp Lys Leu Thr

```

      20      25      30
Asp Leu Gln His Arg Glu Gln Leu His Glu Ala Asn Arg Thr Leu
  35      40      45
Asn Gln Arg Leu Met Glu Gly Tyr Gln Val Asn Ala Leu Gln Leu Asn
  50      55      60
Gln His Ala Glu Glu Val Gly Gly Tyr Gly His Pro Pro Pro Pro
  65      70      75      80
Leu Pro Pro Gln Pro Leu Ala Gln Pro His Ser Glu Ala Phe Phe Asn
      85      90      95
Pro Leu Glu Cys Glu Pro Thr Leu Gln Met Gly Tyr Gln Pro Asp Pro
  100      105      110
Val

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<210> 2187

<211> 309

<212> PRT

<213> Eucalyptus grandis

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      <400> 2187
Met Thr Arg Arg Cys Ser His Cys Cys Asn Lys Gly His Asn Ser Arg
  1      5      10      15
Thr Cys Pro Val Arg Gly Gly Gly Gly Asp Gly Gly Gly Ala Ala Ala
  20      25      30
Ala Pro Ser Ser Ser Ser Pro Ser Thr Ser Ser Ser Gly Ala Ala Ala
  35      40      45
Ala Ala Ala Ala Ser Ala Ser Gly Gly Val Lys Leu Phe Gly Val
  50      55      60
Arg Leu Thr Asp Gly Ser Ile Met Lys Lys Ser Ala Ser Val Gly Cys
  65      70      75      80
Leu Ser Ala Ala His Tyr His Ser Ser Ser Ala Ala Ala Ser Pro
      85      90      95
Asn Pro Gly Ser Ser Pro Ile Asp Gly Ser Asp Gly Tyr Leu Ser Asp
  100      105      110
Asp Pro Ala Pro Gly Ser Arg Ser Ser Asn Arg Arg Val Glu Arg Lys
  115      120      125
Lys Gly Asn Pro Trp Thr Glu Glu His Arg Arg Phe Leu Ile Gly
  130      135      140
Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp Phe
  145      150      155      160
Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr
      165      170      175
Tyr Ile Arg Gln Ser Asn Ala Gly Arg Arg Lys Arg Arg Ser Ser Leu
      180      185      190
Phe Asp Met Ala Pro Asp Met Ala Thr Ala Asp Gln Pro Ser His Pro
      195      200      205
Glu Glu Thr Phe Leu Pro Pro Leu Val Arg Leu Asn Asp Asp Thr Asn
  210      215      220
Ser Thr Thr Ser Thr Ser Met Gly Leu Asp Leu Glu Arg Thr Pro Met
  225      230      235      240
Glu Thr Ser His Pro Glu Thr Ser Glu Gly Gly Gly Asp Val Ala Met
      245      250      255
Glu Ser Ile Asp Gln Val Pro Leu Val Pro Cys Tyr Phe Pro Tyr Tyr
  260      265      270
Leu Pro Leu Pro Phe Pro Met Trp Pro Pro Asn Met Ala Pro Pro Glu
  275      280      285
Asp Gly Arg Val Val Glu Thr Ser His His Arg Val Leu Lys Pro Ile
  290      295      300
Pro Val Ile Pro Lys
  305

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<210> 2188
 <211> 123
 <212> PRT
 <213> Eucalyptus grandis

<400> 2188
 Trp Asp Thr Ser Ser Pro Pro Thr Leu Leu Glu Ser Val Asp Asn
 1 5 10 15
 Phe Ile Leu Ser Pro Ala Arg Thr Gly Lys Ala Glu Ser Glu Cys Leu
 20 25 30
 Ser Pro Arg Asn Ser Gly Leu Leu Asp Ala Leu Val His Glu Ser Lys
 35 40 45
 Thr Met Ser Ser Ala Lys Asn Asn Ser Pro Glu Lys Ser Thr Asn Ser
 50 55 60
 Ser Ala Leu Thr Pro Gly Asp Ile Ser Ser Ser Thr Leu Asp Ile Cys
 65 70 75 80
 Lys Ser Glu Trp Glu Glu Tyr Gly Asp Pro Ile Ser Pro Pro Gly His
 85 90 95
 Ser Ala Thr Ser Val Phe Asn Gly Cys Thr Pro Leu Ser Thr Ser Gly
 100 105 110
 Ser Ser Leu Asp Glu Gln Pro Tyr Pro Asp Thr
 115 120

<210> 2189
 <211> 136
 <212> PRT
 <213> Eucalyptus grandis

<400> 2189
 His Ile Arg Arg Lys Leu Leu Asn Arg Gly Ile Asp Pro Ala Thr His
 1 5 10 15
 Arg Pro Leu Asn Glu Pro Ala Gln Asp Ala Thr Thr Ile Ser Phe Ala
 20 25 30
 Ala Ala Pro Ser Lys Gln Glu Pro Arg Asp Asp Ala Ile Ala Ala Ala
 35 40 45
 Leu Gly Tyr Lys Asn Glu Asn Asn Pro Thr Thr Thr Ala Ala Thr Val
 50 55 60
 Gln Glu Lys Cys Pro Asp Leu Asn Leu Glu Leu Arg Ile Ser Pro Pro
 65 70 75 80
 Cys Gln Gln Gln His Gln Pro Asp Ala Ser Met Gly Met Val Glu Gly
 85 90 95
 Asn His Cys Phe Ala Cys Ser Leu Gly Leu Gln Asn Ser Lys Glu Cys
 100 105 110
 Ser Cys Arg Arg Gly Ala Ser Gly Gly Ser Ser Ala His Gly Gly Tyr
 115 120 125
 Asp Phe Leu Gly Leu Lys Thr Ser
 130 135

<210> 2190
 <211> 109
 <212> PRT
 <213> Eucalyptus grandis

<400> 2190
 Met Glu Phe Pro Ser Glu Phe Ser Glu Ala Ser Ser Gln Lys Arg Ile
 1 5 10 15
 Gly Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn
 20 25 30
 Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 35 40 45
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe

50					55					60							
Ser	Ser	Arg	Gly	Arg	Leu	Tyr	Glu	Tyr	Ala	Asn	Ser	Val	Arg	Gly			
65					70					75				80			
Thr	Ile	Glu	Arg	Tyr	Lys	Lys	Ala	Ser	Ser	Asp	Ser	Ser	Thr	Ser	His		
				85					90					95			
Ser	Pro	Phe	Pro	Glu	Val	Glu	His	Ser	Ser	Phe	Ile	Gln					
			100					105									

<210> 2191
 <211> 116
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2191																	
Met	Gly	Arg	Gly	Arg	Val	Glu	Leu	Lys	Arg	Ile	Glu	Asn	Lys	Ile	Asn		
1				5					10					15			
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Arg	Asn	Gly	Leu	Leu	Lys	Lys	Ala		
			20					25					30				
Tyr	Glu	Leu	Ser	Val	Leu	Cys	Asp	Val	Glu	Val	Ala	Leu	Leu	Ile	Phe		
		35				40						45					
Ser	Ser	Arg	Gly	Lys	Leu	Tyr	Glu	Phe	Gly	Ser	Ala	Gly	Pro	Ser	Gly		
		50			55						60						
Ile	Asn	Lys	Thr	Leu	Glu	Arg	Tyr	Gln	Arg	Asp	Asn	Phe	Thr	Pro	Gln		
65				70					75					80			
Asp	Asn	Val	Ala	Glu	His	Glu	Thr	Gln	Gln	Asn	Trp	Phe	Gln	Glu	Ile		
			85					90					95				
Ser	Lys	Leu	Lys	Ala	Lys	Tyr	Glu	Leu	Phe	Asn	Lys	Leu	Gln	Lys	His		
			100					105					110				
Leu	Leu	Gly	Lys														
			115														

<210> 2192
 <211> 98
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2192																	
Met	Ala	Arg	Gly	Lys	Val	Gln	Met	Lys	Arg	Ile	Glu	Asn	Pro	Val	His		
1				5					10					15			
Arg	Gln	Val	Thr	Phe	Cys	Lys	Arg	Arg	Ala	Gly	Leu	Leu	Lys	Lys	Ala		
			20					25					30				
Lys	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Asp	Ile	Gly	Leu	Phe	Ile	Phe		
		35				40						45					
Ser	Pro	His	Gly	Lys	Leu	Tyr	Glu	Leu	Ala	Thr	Lys	Gly	Thr	Met	Lys		
		50			55						60						
Gly	Leu	Ile	Glu	Arg	Tyr	Met	Lys	Thr	Thr	Gln	Ser	Gln	Ala	Ala	Leu		
65				70					75					80			
Thr	Glu	Glu	Ala	Thr	Pro	Ser	Gln	Pro	Leu	Asp	Ala	Lys	Glu	Glu	Ile		
			85					90					95				
Asn	Ile																

<210> 2193
 <211> 198
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2193																	
Met	Gly	Arg	Gly	Lys	Val	Glu	Leu	Lys	Arg	Ile	Glu	Asn	Lys	Ile	Asn		
1				5					10					15			
Arg	Gln	Val	Thr	Phe	Ala	Lys	Arg	Arg	Asn	Gly	Leu	Leu	Lys	Lys	Ala		

```

                20                25                30
Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
35
Ser Asn Arg Gly Lys Leu Tyr Glu Phe Cys Ser Ser Ser Met Met
50
Lys Thr Ile Glu Lys Tyr Gln Lys Cys Ser Tyr Gly Ser Leu Glu Thr
65
Asn Cys Ser Ile Asn Glu Met Gln Asn Ser Tyr Gln Asp Tyr Leu Lys
85
Leu Lys Thr Arg Val Glu Val Leu Gln Arg Ser Gln Arg Asn Leu Leu
100
Gly Glu Glu Leu Gly Pro Leu Asn Ser Lys Glu Leu Glu Gln Leu Glu
115
His Gln Leu Glu Asn Ser Leu Lys Gln Ile Arg Ser Ala Lys Thr Gln
130
Phe Met Phe Asp Gln Leu Ala His Leu Gln His Lys Glu Gln Met Leu
145
Val Glu Ala Asn Arg Glu Leu Arg Lys Lys Leu Glu Glu Ser Asn Thr
165
Arg Ile Pro Leu Arg Leu Gly Trp Glu Ala Glu Asp His Asn Ile
180
Ser Tyr Ser Arg Leu Pro
195

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<210> 2194
 <211> 153
 <212> PRT
 <213> Eucalyptus grandis

```

<400> 2194
Met Arg Lys Pro Cys Cys Asp Lys Arg Asp Thr Asn Lys Gly Ala Trp
1
5
Ser Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Lys His Gly
20
Glu Gly Ser Trp Arg Thr Leu Pro Gln Ala Ala Gly Leu Leu Arg Cys
35
Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu
50
Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile Ile Lys Leu
65
His Ala Leu Leu Gln Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu Pro
85
Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser His Leu Arg
100
Arg Lys Leu Leu Lys Met Gly Ile Asp Pro Asn Asn His Arg Leu Asn
115
Gln Asn Leu Pro Arg Ser Gln Thr Arg Met Pro Arg Gln His Phe Leu
130
Ile Gln Tyr Glu Asp His Met Thr Leu
145
150

```

<210> 2195
 <211> 104
 <212> PRT
 <213> Eucalyptus grandis

```

<400> 2195
Glu Ala Leu Gln Gln Ser Leu Val Asp Thr Leu Ser Ser Thr Thr Leu
1
5
Ser Pro Thr Gly Ser Gly Asn Val Ala Glu Tyr Met Gly Gln Met Ala
20
25
30

```

```

Ile Ala Met Gly Lys Leu Ala Thr Leu Glu Asn Phe Val His Gln Ala
   35          40          45
Asp Leu Leu Arg Gln Gln Thr Leu Gln Gln Met His Arg Ile Leu Thr
   50          55          60
Thr Arg Gln Ala Ala Arg Ala Leu Leu Val Ile Asn Asp Tyr Ile Ser
   65          70          75          80
Arg Leu Arg Ala Leu Ser Ser Leu Trp Leu Ala Arg Pro Arg Thr Glu
   85          90          95
Asn Ile Cys Ser Ala Lys Leu Phe
   100

```

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<210> 2196
<211> 25
<212> PRT
<213> Eucalyptus grandis

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```

<400> 2196
Asp Pro Leu Met Lys Pro Trp Gln Ile Pro Cys Pro Ile Gln Pro Ile
   1           5           10          15
Ile Ala Ser Ala Asp Leu Phe Glu Cys
   20          25

```

```

<210> 2197
<211> 87
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2197
Met Gly Arg Arg Lys Ile Glu Ile Gln Pro Ile Thr His Glu Arg Asn
   1           5           10          15
Arg Ser Val Thr Phe Leu Lys Arg Lys Asn Gly Leu Phe Lys Lys Ala
   20          25          30
Tyr Glu Leu Gly Val Leu Cys Ser Val Asp Val Ala Val Ile Ile Phe
   35          40          45
Glu Asp Arg Pro Gly His Ser Pro Lys Leu Tyr Gln Tyr Ser Ser Arg
   50          55          60
Gly Ile Gln Asp Ile Val Gln Arg His Leu His His Asp Gly Glu Thr
   65          70          75          80
Asp Asn Arg Gly Pro Gly Asp
   85

```

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<210> 2198
<211> 107
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2198
Arg Asp Arg Thr Phe Leu Val Gly Leu Glu Lys Leu Gly Lys Gly Asp
   1           5           10          15
Trp Arg Gly Ile Ser Arg Ser Tyr Val Thr Thr Arg Thr Pro Ala Gln
   20          25          30
Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg Gln Val Ser Phe Asn
   35          40          45
Lys Lys Lys Arg Arg Ser Ser Leu Phe Asp Met Val Lys Asn Gln Cys
   50          55          60
Ser Tyr Lys Leu Leu Pro Ser Tyr Arg Leu Ser Ser Ile Ser Leu Met
   65          70          75          80
Gly Phe Asp Lys Phe Leu Leu Tyr Lys Val Asp Val Lys Thr Ala Ala
   85          90          95
Gly Asp Arg Leu Gly Ser Leu Thr Ala Lys Pro
   100          105

```

<210> 2199
 <211> 107
 <212> PRT
 <213> Eucalyptus grandis

<400> 2199
 Met Thr Leu Glu Phe Leu Val Arg Ala Gly Val Val Arg Glu Asp
 1 5 10 15
 Thr Gln Met Met Ala Arg Pro Gly Asp Asn Gly Val His Glu Glu Met
 20 25 30
 Ser Gln Phe Thr Ser Asn Gly Leu Ala Ser Ser Ala Ala Gly Asn
 35 40 45
 Asp Phe Ile Phe Ser Ser Lys Pro Ala Gly Ser Ser Leu Asp Phe Ile
 50 55 60
 Gly Thr Arg Pro Thr Gln Leu Gln Gln Pro Gln Pro Gln Pro Leu
 65 70 75 80
 Glu Pro Pro Ala Pro Leu Phe Pro Lys Pro Glu Thr Val Ser Phe Ala
 85 90 95
 Thr Ser Val His Leu Pro Asn Thr Ala Ser Tyr
 100 105

<210> 2200
 <211> 150
 <212> PRT
 <213> Eucalyptus grandis

<400> 2200
 Ala Asn Ala Pro Leu Arg Ile Ala Met Asn Ser Asn Ala Ser Ser Asn
 1 5 10 15
 Pro Gln Ser Met Ala Thr Ser Thr Thr Ser Ala Thr Thr Pro Ala Ala
 20 25 30
 Gly Gly Asp Gly Gly Lys Lys Val Arg Lys Pro Tyr Thr Ile Thr Lys
 35 40 45
 Ser Arg Glu Ser Trp Thr Glu Glu His Asp Lys Phe Leu Glu Ala
 50 55 60
 Leu Gln Leu Phe Asp Arg Asp Trp Lys Lys Ile Glu Asp Phe Val Gly
 65 70 75 80
 Ser Lys Thr Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu
 85 90 95
 Lys Val Gln Lys Asn Gly Ala Val Ala His Val Pro Pro Pro Arg Pro
 100 105 110
 Lys Arg Lys Ala Ala His Pro Tyr Pro Gln Lys Ala Ser Lys Asn Val
 115 120 125
 Leu Val Pro Leu Gln Ala Ser Met Ala Gln Pro Ser Ser Thr Asn Pro
 130 135 140
 Ala Phe Thr Ile Thr Pro
 145 150

<210> 2201
 <211> 171
 <212> PRT
 <213> Eucalyptus grandis

<400> 2201
 Met Gly Arg Ser Pro Cys Cys Glu Ser Glu His Met Asn Lys Gly Ala
 1 5 10 15
 Trp Ser Lys Glu Glu Asp Glu Arg Leu Ile Ala Tyr Ile Lys Arg His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45


```

Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
  50          55          60
Leu Lys Arg Gly Asn Phe Ser Asp Glu Glu Asp Glu Leu Ile Ile Thr
  65          70          75          80
Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Ala Arg Leu
  85          90          95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile
 100          105          110
Lys Arg Lys Leu His Ala Arg Gly Ile Asp Pro Gln Thr His Arg Pro
 115          120          125
Leu Arg Leu His Gln His Cys Trp Cys Trp Cys Cys His Phe Thr
 130          135          140
Leu Ser Val Leu Thr Leu Thr Thr Ala Ala Thr Arg Pro Arg Leu Thr
 145          150          155          160
Arg Arg Leu Val Lys Asn Tyr His His His Gln
          165          170

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<210> 2202
 <211> 98
 <212> PRT
 <213> *Eucalyptus grandis*

```

<400> 2202
Met Asn Ser Pro Leu Ala Gln Leu Val Asn Pro Arg Arg Met His Thr
  1          5          10          15
Tyr Glu Pro Phe Asp Gln Phe Pro Met Trp Gly Asp Thr Phe Lys Ala
 20          25          30
Asp Lys Val Lys Asn Leu Glu Ala Ser Ser Ser Val Ile Val His Ala
 35          40          45
Val Asp Asp Gly Leu Asp Lys Lys Phe Glu Tyr Val Ser His Glu Ser
 50          55          60
Ala Glu Asn Ser Ser Ser Arg Ser Asp Gln Glu Ala Asn Arg Pro Asp
 65          70          75          80
Lys Val Gln Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser
 85          90          95
Arg Leu

```

<210> 2203
 <211> 111
 <212> PRT
 <213> *Eucalyptus grandis*

```

<400> 2203
Met Asn Ser Pro Leu Ala Gln Leu Val Asn Pro Arg Arg Met His Thr
  1          5          10          15
Tyr Glu Pro Phe Asp Gln Phe Pro Met Trp Gly Asp Thr Phe Lys Ala
 20          25          30
Asp Lys Val Lys Asn Leu Glu Ala Ser Ser Ser Val Ile Val His Ala
 35          40          45
Val Asp Asp Gly Leu Asp Lys Lys Phe Glu Tyr Val Ser His Glu Ser
 50          55          60
Ala Glu Asn Ser Ser Ser Arg Ser Asp Gln Glu Ala Asn Arg Pro Asp
 65          70          75          80
Lys Val Gln Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser
 85          90          95
Arg Leu Arg Lys Lys Lys Tyr Val Gln Gln Leu Glu Ser Ser Arg
 100          105          110

```

<210> 2204
 <211> 162

<212> PRT

<213> Eucalyptus grandis

<400> 2204

```

Met Ala Ser Ser Ser Val Ala Ser Ala Arg Lys Asp Ala Asp Arg
 1          5          10          15
Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp Glu Ala Leu Gln Arg Leu
 20          25          30
Val Gln Ser Tyr Gly Pro Arg Asn Trp Ser Leu Ile Ser Lys Ser Ile
 35          40          45
Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu
 50          55          60
Ser Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Glu Ala
 65          70          75          80
Ile Val Arg Ala His Ala Arg Phe Gly Asn Lys Trp Ala Thr Ile Ala
 85          90          95
Arg Leu Leu Asn Gly Arg Thr Asp Asn Ala Val Lys Asn His Trp Asn
100          105          110
Ser Thr Leu Lys Arg Lys Cys Ser Ser Thr Cys Ser Ala Gly Gly Asp
115          120          125
Asp Ala Asp Ala Leu Ala Glu Gln Gln Pro Leu Lys Arg Ser Ala Ser
130          135          140
Leu Gly Thr Pro Thr Gly Gly Asn Asn Ala Val Ser Asp Leu Phe Phe
145          150          155          160
Ser Pro

```

<210> 2205

<211> 92

<212> PRT

<213> Eucalyptus grandis

<400> 2205

```

Met Ala Lys Glu Lys Ile Lys Ile Lys Lys Ile Asp Asn Leu Thr Ala
 1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Arg Gly Leu Ile Lys Lys Ala
 20          25          30
Glu Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ser Leu Ile Val Phe
 35          40          45
Ser Ala Thr Gly Lys Leu Tyr Asp Phe Ser Ser Ser Arg Gln Met Lys
 50          55          60
Gly Glu Asp Leu Glu Gly Leu Asn Val Glu Glu Leu Asp Gln Leu Glu
 65          70          75          80
Lys Lys Leu Glu Ala Gly Leu Ser Leu Val Ile Lys
 85          90

```

<210> 2206

<211> 148

<212> PRT

<213> Eucalyptus grandis

<400> 2206

```

Met Arg Lys Pro Asp Ala Ser Gly Lys Asn Ser Ser Asn Ser Asn Ala
 1          5          10          15
Asn Lys Leu Arg Lys Gly Leu Trp Ser Pro Glu Glu Asp Asp Lys Leu
 20          25          30
Met Asn Tyr Met Leu Asn Asn Gly Gln Gly Cys Trp Ser Asp Val Ala
 35          40          45
Arg Asn Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp
 50          55          60
Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Ala Phe Ser Pro Gln

```

```

65              70              75              80
Glu Glu Glu Leu Ile Ile His Leu His Ser Ile Leu Gly Asn Arg Trp
      85
Ser Gln Ile Ala Ala Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys
      100
Asn Phe Trp Asn Ser Thr Ile Lys Lys Arg Ser Arg Thr Arg His His
      115
Leu Leu Val Asp Thr Arg Gln Thr Arg Ala Ile Leu Leu Ala Ser Asp
      130
Val Lys Asp Val
145

```

```

<210> 2207
<211> 73
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2207
Ala Pro Glu Ile Ala Pro Pro Leu Ala Ala Pro Arg Gly Gly His His
1              5              10              15
Arg Arg Ala His Ser Glu Val Asn Phe Arg Ile Pro Glu Asp Leu Asp
      20
Leu Gly Pro Asp Pro Phe Glu Asn Gly Pro Ser Gly Ser Phe Glu Asp
      35
Phe Gly Ser Glu Asp Asp Leu Leu Ser Thr Tyr Met Asp Ile Glu Lys
      50
Phe Gly Ser Ser Ser Thr Arg Ala Gly
65              70

```

```

<210> 2208
<211> 147
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2208
Ser Glu Asn Val Ser Gly Gly Ala Ile Glu Arg Pro Arg Ala Thr Gly
1              5              10              15
Lys Leu Ala Ala Pro Val Asn Ser Pro Ser Met Ser Ser Ser Leu Asp
      20
Leu Lys Asn Ser Cys Met Asp Ala Asn Ala Asn Pro Val Ser Ile Leu
      35
Gln Pro Gly Val Val Pro Pro Glu Ala Trp Leu Gln Val Met Ser Leu
      50
Cys Gly Arg Leu Leu Lys Ile Phe Pro Trp Lys Ala Ser Thr Ser Val
65              70
Leu Ser Ala Val Ser Ser Ser Cys Ser Leu Gln Tyr His Arg Leu Cys
      85
Phe Ser Lys Phe Ala Leu Cys Lys Asn Glu Arg Glu Leu Lys Arg Glu
      100
Arg Arg Lys Gln Ser Asn Arg Glu Ser Ala Arg Arg Ser Arg Leu Arg
      115
Lys Gln Ala Glu Thr Glu Glu Leu Gly Lys Lys Val Asp Ser Leu Ser
      130
Ala Glu Asn
145

```

```

<210> 2209
<211> 115
<212> PRT
<213> Eucalyptus grandis

```

<400> 2209
 Phe Phe Leu Tyr Ile Ile Ser Leu Phe Leu Val Arg Glu Asn Ser Glu
 1 5 10 15
 Arg Ser Arg Glu Gly Thr Ser Ser Asn Gly Asp Gly Lys Ser Glu Val
 20 25 30
 Gln Gly Lys Val Ala Gly Glu Val Asp Ala Ala Ser Glu Asn Val Ser
 35 40 45
 Gly Gly Ala Ile Glu Arg Pro Arg Ala Thr Gly Lys Leu Ala Ala Pro
 50 55 60
 Val Asn Ser Pro Ser Met Ala Ser Ser Leu Asp Leu Lys Asn Ser Cys
 65 70 75 80
 Met Asp Ala Asn Ala Asn Pro Val Ser Ile Leu Gln Pro Gly Val Val
 85 90 95
 Pro Pro Glu Ala Trp Leu Gln Asn Glu Arg Glu Leu Lys Arg Glu Arg
 100 105 110
 Arg Glu Gln
 115

<210> 2210
 <211> 192
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2210
 Met Gly Arg Gln Pro Cys Cys Asp Lys Ser Gly Val Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Ala Glu Glu Asp Lys Lys Leu Ile Asn Phe Ile Leu Thr Asn
 20 25 30
 Gly His Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Leu Leu Ser Glu Ala Glu Glu Gln Leu Val Ile Asp
 65 70 75 80
 Leu His Ala Arg Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr His Ile
 100 105 110
 Lys Lys Lys Leu Leu Lys Met Gly Ile Asp Pro Val Thr His Glu Pro
 115 120 125
 Leu Asn Lys Pro Gln Lys Thr Pro Ser Glu His Asp Pro Glu Ala Ser
 130 135 140
 Leu Ser Ser Ser Gln Ala Asp Pro Thr Ser Glu Ser Pro Ala Asn Thr
 145 150 155 160
 His Gln Pro Asn Asn Ala His Ala Asp Glu Val Gln Leu Val Leu Val
 165 170 175
 Leu Pro Val Gly Leu Val Arg Arg Glu Leu Leu Arg Gln Gly Arg
 180 185 190

<210> 2211
 <211> 89
 <212> PRT
 <213> *Pinus radiata*

<400> 2211
 Leu Ser Arg Asn Met Asp Asp Val Phe Val Gln Arg Cys Asn Arg Asn
 1 5 10 15
 Phe Thr Ala Arg Asp Arg Leu Ile Ser Lys Glu Arg Arg Asn Phe Gly
 20 25 30
 Trp Val Cys Gly Val Thr Glu Glu Glu Glu Leu Ile Arg Met
 35 40 45

Tyr Lys Leu Val Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu Pro
 50 55 60
 Gly Arg Lys Ala Glu Glu Ile Glu Arg Tyr Trp Lys Met Arg Ser Ile
 65 70 75 80
 Asn Ala Ala Pro Leu Lys Pro Asn Thr
 85

<210> 2212

<211> 237

<212> PRT

<213> Pinus radiata

<400> 2212

Met Val Lys Glu Leu Leu Met Met Cys Ser Asn Cys Gly His Ser Gly
 1 5 10 15
 His Ser Ser Arg Ala Cys Pro Asp Arg Gly Ser Val Lys Leu Phe Gly
 20 25 30
 Val Arg Leu Ile Ala Thr Asp Asp Gly Met Ala Cys Met Arg Lys Ser
 35 40 45
 Leu Ser Met Gly Asn Leu Gly His Tyr Arg Ser Leu Tyr Asn Val Asn
 50 55 60
 His Cys Ser Gly Thr Ser Glu Cys Gly Ser Ala Asp Gln Asp Gly Tyr
 65 70 75 80
 Leu Ser Asp Gly Phe Val His Ser Ser Ser Asn Ala Arg Glu Arg Lys
 85 90 95
 Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr Gly
 100 105 110
 Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn Phe
 115 120 125
 Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr
 130 135 140
 Phe Leu Arg Gln Ser Asn Leu Asn Lys Arg Lys Arg Arg Ser Ser Leu
 145 150 155 160
 Phe Asp Met Cys Pro His Asp Ser His Val Thr Ser Ser Phe Arg Arg
 165 170 175
 Glu Asp Ser Leu Gly Asn Leu Tyr Glu Phe Ser Pro Lys His Ser Ala
 180 185 190
 Leu Gly Val Ser Pro Asn Phe Glu Leu Tyr Ser Phe Gly Val Ser Pro
 195 200 205
 Thr Leu Ser Leu Gly Arg Ser Leu Gln Pro Val Glu Ala Val Leu Glu
 210 215 220
 Glu Lys Ala Ala His Tyr His Pro Val Asn Ser Glu Glu
 225 230 235

<210> 2213

<211> 55

<212> PRT

<213> Pinus radiata

<400> 2213

Trp Leu Gln Leu Cys Ser Gly Ile Asp Glu His Ala Ala Gly Phe Cys
 1 5 10 15
 Ser Gln Leu Val Phe Ala Pro Ile Asp Ala Ser Phe Ala Asp Asp Ala
 20 25 30
 Pro Leu Ala Pro Ser Gly Phe Arg Val Ile Pro Leu Glu Ser Gly Ser
 35 40 45
 Glu Cys Phe Ser Ser Lys Thr
 50 55

<210> 2214

<211> 119

<212> PRT

<213> Pinus radiata

<400> 2214

Gly Val Leu Lys Phe Pro Cys Phe Asp Leu Ile Thr Met Asn Leu Met
 1 5 10 15
 Glu Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg Arg Thr Val Arg
 20 25 30
 Gly Lys Thr Gln Leu Lys Arg Ile Glu Asn Gly Thr Ser Arg Gln Val
 35 40 45
 Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu
 50 55 60
 Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe Ser Pro Arg
 65 70 75
 Gly Lys Leu Tyr Glu Phe Ala Asn Pro Ser Met Gln Lys Met Leu Glu
 85 90 95
 Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asn Pro Thr Ser Thr Ala Lys
 100 105 110
 Glu Gln Asp Val Gln Cys Leu
 115

<210> 2215

<211> 146

<212> PRT

<213> Pinus radiata

<400> 2215

Pro Lys Gln Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His Gly His
 1 5 10 15
 Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Leu Leu Cys Gly
 20 25 30
 Lys Ser Cys Arg Leu Arg Trp Ala Asn Tyr Leu Arg Pro Asp Ile Lys
 35 40 45
 Arg Gly Lys Phe Thr Val Gln Glu Glu Gln Thr Ile Ile Gln Leu His
 50 55 60
 Ala Leu Leu Gly Asn Arg Trp Ser Ala Ile Ala Thr His Leu Pro Lys
 65 70 75
 Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu Lys Lys
 85 90 95
 Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His Lys Pro Lys Ser
 100 105 110
 Glu Ser Ile Met Val Pro Gly Val Gln Ser Ser Asn Gly Ser Ser Asn
 115 120 125
 Leu Ser His Met Ala Gln Trp Glu Ser Ala Arg Leu Glu Ala Glu Ser
 130 135 140
 Lys Ala
 145

<210> 2216

<211> 106

<212> PRT

<213> Pinus radiata

<400> 2216

Gly Ile Phe Ile Gly Gly Ser Cys Val Gly Gly Asp Gln Ser His Ser
 1 5 10 15
 Met Ser Gly Asn Gly Ala Leu Ala Phe Asp Met Glu Tyr Ala Arg Trp
 20 25 30
 Leu Asp Glu His His Arg Gln Ile Asn Glu Leu Arg Ser Ala Val Asn
 35 40 45
 Ser His Val Gly Asp Asn Glu Leu Arg Gly Leu Val Glu Gly Val Met

50						55						60					
Gly	His	Tyr	Asp	Glu	Ile	Phe	Arg	Leu	Lys	Thr	Val	Ala	Ser	Lys	Ala		
65					70					75				80			
Asp	Val	Phe	His	Leu	Val	Ser	Gly	Met	Trp	Lys	Thr	Pro	Ala	Glu	Arg		
			85						90					95			
Cys	Phe	Met	Trp	Met	Gly	Gly	Phe	Arg	Pro								
			100					105									

<210> 2217
 <211> 114
 <212> PRT
 <213> Pinus radiata

<400> 2217																	
Asn	Arg	Arg	Ala	Arg	Thr	Lys	Trp	Lys	Arg	Asn	Glu	Val	Glu	Cys	Asp		
1			5					10						15			
Asn	Leu	Lys	Arg	Cys	Cys	Glu	Ser	Leu	Arg	Glu	Glu	Asn	Arg	Arg	Leu		
			20					25					30				
Glu	Lys	Glu	Val	Gln	Ser	Leu	Arg	Ala	Met	Lys	Val	Pro	Gln	Ser	Pro		
		35				40					45						
Asn	Ser	Met	Pro	Leu	Ala	Ala	Ala	Thr	Leu	Ala	Met	Cys	Pro	Ala	Cys		
50					55					60							
Glu	Gly	Leu	Ala	Ile	Lys	Asn	Arg	Gly	Ala	Ala	Thr	Ser	Ser	Thr	Ala		
65				70					75					80			
Lys	Ser	Gln	Gln	Ser	Leu	Leu	Thr	Ile	Met	Gly	Ile	Gly	Asp	Val	Asn		
			85					90					95				
Met	Ile	Ser	Lys	Asn	Asn	Gln	Thr	Pro	Ser	Met	Gly	Met	Gly	Asp	Glu		
			100				105						110				
Met	Asn																

<210> 2218
 <211> 126
 <212> PRT
 <213> Pinus radiata

<400> 2218																	
Trp	Asn	Leu	Ile	Glu	Glu	Lys	Ile	Glu	Gly	Arg	Ser	Gly	Lys	Ser	Cys		
1			5					10						15			
Arg	Leu	Arg	Trp	Phe	Asn	Gln	Leu	Asp	Pro	Arg	Ile	Asn	Arg	Arg	Pro		
			20					25					30				
Phe	Thr	Glu	Glu	Asp	Glu	Glu	Lys	Leu	Ala	Ala	His	Arg	Arg	Leu	Tyr		
		35				40					45						
Gly	Asn	Lys	Trp	Ala	Met	Ile	Ala	Arg	Leu	Phe	Pro	Gly	Arg	Thr	Asp		
	50					55				60							
Asn	Ala	Val	Lys	Asn	His	Trp	His	Val	Ile	Met	Ala	Arg	Arg	Tyr	Arg		
65				70					75					80			
Glu	Gln	Ser	Ser	Ala	Phe	Gly	Arg	Arg	Lys	Leu	Pro	Gln	Val	His	Arg		
			85					90					95				
Arg	Glu	Lys	Arg	Ala	Cys	Thr	Asp	Asp	Glu	Thr	Arg	Met	Gly	Ser	Ser		
			100				105						110				
Ser	Cys	Asn	Met	Trp	Val	Asp	Lys	Tyr	Ser	Ser	Leu	Lys	Ser				
		115				120						125					

<210> 2219
 <211> 123
 <212> PRT
 <213> Pinus radiata

<400> 2219																	
Leu	Ile	Ala	Tyr	Ile	Arg	Ala	Asn	Gly	Glu	Gly	Ser	Trp	Arg	Ser	Leu		

```

1           5           10           15
Pro Lys Ala Ala Gly Leu Pro Arg Cys Gly Lys Ser Cys Arg Leu Arg
                20           25           30
Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu
                35           40           45
Glu Glu Asp Glu Leu Ile Ile Lys Leu His Ser Val Val Gly Asn Lys
                50           55           60
Trp Ser Leu Ile Ala Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile
                65           70           75
Lys Asn Tyr Trp Asn Thr His Ile Lys Arg Lys Leu Leu Ile Lys Gly
                85           90           95
Ile Asp Pro Gln Ser His Arg Pro Leu Gly Gln Pro Tyr Ser Ser Asn
                100          105          110
Asn Met Pro Val Ser Arg Leu Phe Leu Thr Ser
                115          120

```

<210> 2220

<211> 176

<212> PRT

<213> Pinus radiata

<400> 2220

```

Leu Ser Asn Ile Glu Pro Lys Gln Ile Lys Val Trp Phe Gln Asn Arg
1           5           10           15
Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser Arg Leu Gln Thr Val
                20           25           30
Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu Met Glu Glu Asn Asp
                35           40           45
Arg Leu Gln Lys Gln Val Ser Gln Leu Val Tyr Glu Asn Gly Tyr Met
                50           55           60
Arg Gln Gln Leu Gln Asn Ala Ser Val Ala Ala Thr Asp Thr Ser Cys
                65           70           75
Glu Ser Val Val Thr Ser Gly Gln His Gln His Asn Pro Thr Pro Gln
                85           90           95
His Pro Pro Arg Asp Ala Ser Pro Ala Gly Leu Leu Ser Ile Ala Glu
                100          105          110
Glu Thr Leu Thr Glu Phe Leu Ser Lys Ala Lys Gly Ala Ala Val Asp
                115          120          125
Trp Val Gln Met Pro Gly Met Lys Pro Gly Pro Asp Ser Ile Gly Ile
                130          135          140
Val Ala Ile Ser Asn Thr Cys Asn Gly Val Ala Ala Arg Ala Cys Gly
                145          150          155
Leu Val Gly Leu Asp Pro Thr Lys Val Ala Glu Ile Leu Lys Asp Arg
                165          170          175

```

<210> 2221

<211> 119

<212> PRT

<213> Pinus radiata

<400> 2221

```

Leu Tyr Gln Cys Gln Ala Leu Phe Glu Asn Gly Ala Val Glu Lys Leu
1           5           10           15
Ser Arg Thr Tyr Asn Asp Leu Tyr Asp Asp Leu Lys Glu Glu Ile Leu
                20           25           30
Ser Trp Leu Pro Val Glu Cys Val Cys Arg Phe Arg Ser Val Ser Lys
                35           40           45
Gln Trp Asn Asn Leu Leu Ser Ser His Asn Phe Ile Lys Lys Val Trp
                50           55           60
Arg Lys Lys Pro Ala Asn Met Asn Pro Trp Leu Leu His Pro Val
                65           70           75

```



```

Asn Ser Ser Tyr Cys Leu Ala Tyr Cys Phe Phe Thr Arg Thr Trp Lys
      85          90          95
Thr Thr Ser Ser Ile Ser Ile Glu Asn Ala Asn Asn Tyr Gly Glu Asn
      100        105        110
Gly Ile Leu Gly Ile Ser Cys
      115

```

```

<210> 2222
<211> 124
<212> PRT
<213> Pinus radiata

```

```

<400> 2222
Asp Lys Lys Leu Ile Asn Phe Leu Thr Thr His Gly Gln Cys Cys Trp
 1      5      10
Arg Thr Val Pro Glu Leu Ala Gly Ile Ser Arg Cys Gly Lys Ser Cys
      20      25      30
Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Val
      35      40      45
Phe Ser Glu Ser Glu Glu Lys Leu Ile Leu Asp Leu His Ser Arg Val
      50      55      60
Gly Asn Arg Trp Ser Lys Ile Ala Ser Phe Leu Pro Gly Arg Thr Asp
      65      70      75      80
Asn Glu Leu Lys Asn Tyr Trp Asn Thr His Ile Lys Lys Lys Leu Lys
      85      90      95
Arg Met Gly Leu Asp Pro Gly Asp Ala Gln Ala Ile Ser Glu Thr Leu
      100      105      110
Pro Gln Pro Ala Pro Val Ala Glu Asn Asn Asp Val
      115      120

```

```

<210> 2223
<211> 175
<212> PRT
<213> Pinus radiata

```

```

<400> 2223
Met Lys Gly Lys Ser Pro Gly His Asp Glu Pro Asp Arg Ile Lys Gly
 1      5      10      15
Pro Trp Ser Pro Glu Glu Asp Ala Ala Leu Gln His Phe Val Gln Lys
      20      25      30
Tyr Gly Pro Arg Asn Trp Ser Leu Ile Ser Lys Ala Ile Pro Gly Arg
      35      40      45
Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln
      50      55      60
Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Ala Thr Ile Val Arg
      65      70      75      80
Ala His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg Met Leu
      85      90      95
Ser Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu
      100      105      110
Arg Arg Arg Cys Gln Gly Gly Gly Ala Leu Val Ile Asp Asp Glu Ile
      115      120      125
Ser Ser Gly Ala Asp Gly Phe Arg Lys Arg Asn Leu Ser Glu Asp Ala
      130      135      140
Asp Ala Ser Arg Lys Phe Lys Lys Leu Ser Leu Gly Thr Thr Thr Thr
      145      150      155      160
Thr Thr Thr Thr Glu Pro Ser Thr Ser Ser Ala Ser Asp Arg Ser
      165      170      175

```

```

<210> 2224
<211> 103

```

<212> PRT

<213> Pinus radiata

<400> 2224

```

Met Ser Ser Arg Ser Cys Ser Leu Cys Gly Leu Asn Gly His Asn Ser
 1          5          10
Arg Thr Cys Val Gly Ser Gly Val Met Leu Phe Gly Val Arg Leu Thr
 20          25          30
Asp Gly Pro Met Arg Lys Ser Ala Ser Met Asn Asn Leu Ser Asn Leu
 35          40          45
Ser Gln Tyr Glu His Ser Asp Pro Ala Glu Val Ala Ala Glu Gly Phe
 50          55          60
Asp Gly Tyr Val Ser Asp Asp Leu Val His Ser Ser Ser Asn Ala Arg
 65          70          75          80
Glu Arg Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe
 85          90          95
Leu Val Gly Leu Gln Arg Val
100

```

<210> 2225

<211> 96

<212> PRT

<213> Pinus radiata

<400> 2225

```

Met Ser Ser Arg Ser Cys Ser Leu Cys Gly Leu Asn Gly His Asn Ser
 1          5          10
Arg Thr Cys Val Gly Ser Gly Val Met Leu Phe Gly Val Arg Leu Thr
 20          25          30
Asp Gly Pro Met Arg Lys Ser Ala Ser Met Asn Asn Leu Ser Asn Leu
 35          40          45
Ser Gln Tyr Glu His Ser Asp Pro Ala Glu Val Ala Ala Glu Gly Phe
 50          55          60
Asp Gly Tyr Val Ser Asp Asp Leu Val His Ser Ser Ser Asn Ala Arg
 65          70          75          80
Glu Arg Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe
 85          90          95

```

<210> 2226

<211> 131

<212> PRT

<213> Pinus radiata

<400> 2226

```

Arg Gly Arg Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Ser Arg Gln
 1          5          10          15
Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Met Lys Lys Ala Ala Glu
 20          25          30
Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe Ser Asn
 35          40          45
Lys Asp Lys Leu Tyr Glu Phe Ala Ser Ser Ser Met Thr Lys Ile Leu
 50          55          60
Glu Arg Tyr Arg Lys Arg Ser Asn Leu Ile Gln Asp Ile Gly Lys Asp
 65          70          75          80
Pro Gln Asn Ser Asp Ile Glu Leu Thr Arg Leu Lys Glu Glu Val Asp
 85          90          95
Arg Leu Gln Arg Ser Arg Arg His Leu Leu Gly Glu Asp Leu His Gln
100          105          110
Leu Gly Ala Thr Asp Leu Gln His Leu Glu Gln Gln Leu Glu Glu Ala
115          120          125
Leu Gln Lys

```

130

<210> 2227
 <211> 49
 <212> PRT
 <213> Pinus radiata

<400> 2227
 Met Pro Ser Ile Met Glu Lys Gln Asn Ser Gly Glu Asp Ser Asp Ser
 1 5 10 15
 Lys Gly Gln Leu Asp Asn Gly Lys Tyr Val Arg Tyr Thr Asn Glu Gln
 20 25 30
 Val Glu Thr Leu Glu Arg Ala Tyr Asn Glu Cys Ser Lys Pro Ser Thr
 35 40 45
 Arg

<210> 2228
 <211> 128
 <212> PRT
 <213> Pinus radiata

<400> 2228
 Lys Ile Glu Asn Thr Thr Ser Arg Gln Val Thr Phe Cys Lys Arg Lys
 1 5 10 15
 Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu Ser Leu Leu Cys Asp Ala
 20 25 30
 Glu Val Ala Leu Leu Ile Phe Ser Thr Ser Gly Arg Leu Tyr Glu Phe
 35 40 45
 Ala Asn Lys Ser Val Ser Ala Thr Thr Glu Arg Tyr Met Arg Thr Tyr
 50 55 60
 Ala Glu Asn Met Pro Gln Ser Arg Ala Leu Tyr Pro Asp Cys His His
 65 70 75 80
 Trp Gln Glu Glu Val Arg Lys Leu Thr Gln Gln Arg Asp Ser Leu Thr
 85 90 95
 Asn Ser Ile Arg Gln Ile Met Gly Glu Gly Leu Glu Ser Leu Ser Met
 100 105 110
 Lys Glu Leu Lys His Ile Gln Val Gln Leu Glu Lys Ser Ile Ser Cys
 115 120 125

<210> 2229
 <211> 181
 <212> PRT
 <213> Pinus radiata

<400> 2229
 Glu Asp Leu Asp Asp Cys Ile His Pro Pro Glu Lys Lys Arg Arg Leu
 1 5 10 15
 Thr Ala Asp Gln Val Gln Phe Leu Glu Arg Ser Phe Glu Ile Glu Asn
 20 25 30
 Lys Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Glu Leu Gly Leu
 35 40 45
 Gln Pro Arg Gln Val Ala Val Trp Phe Gln Asn Arg Arg Ala Arg Trp
 50 55 60
 Lys Thr Lys Gln Leu Glu Arg Asp Tyr Asp Ile Leu Lys Ser Arg Tyr
 65 70 75 80
 Glu Asn Leu Arg Val Asp Tyr Asp Ser Leu Leu Lys Glu Lys Asp Lys
 85 90 95
 Leu Arg Ala Glu Val Thr Phe Leu Thr Asp Lys Leu His Asp Ser Asp
 100 105 110
 His Glu Ala Leu Thr Lys Asp Ser Glu Ser Ala Asp Lys Lys Val Tyr


```

      1           5           10           15
Thr Cys Pro Asn Arg Gly Gly Val Lys Leu Phe Gly Val Arg Leu Thr
      20           25           30
Asp Gly Pro Ile Arg Lys Ser Ala Ser Met Gly Asn Leu Met Met Met
      35           40           45
Ser Asn Pro Ser Ser Pro Ala Asp Pro Ser Glu Pro Ala Ser Ala Ala
      50           55           60
Ala Ala Ala Ala Ala Ala Ala Ser Gly Tyr Leu Ser Asp Gly Leu
      65           70           75           80
Val Glu Ala Ser Thr Ser Ser Asn Ser Arg Glu Arg Lys Lys Gly Val
      85           90           95
Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu Gly Leu Gln Lys
      100          105          110
Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn Phe Val Ile Thr
      115          120          125
Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Ile Arg
      130          135          140
Gln Ser Asn Met Thr Arg
      145          150

```

<210> 2233

<211> 102

<212> PRT

<213> Pinus radiata

<400> 2233

```

Met Lys Met Ser Leu Pro Ser Asn Val Leu Thr Leu Ser Ala Asp Ser
      1           5           10           15
Asn Ser Asn Ser Asn Ser Ile Ser Ser Ser Gly Asp Glu Leu Ala Ala
      20           25           30
Lys Val Arg Lys Pro Tyr Thr Ile Thr Lys Gln Arg Glu Arg Trp Ser
      35           40           45
Glu Asp Glu His Leu Lys Phe Leu Glu Ala Leu Lys Met Tyr Gly Arg
      50           55           60
Ala Trp Arg Arg Ile Glu Glu His Ile Gly Thr Lys Thr Ala Val Gln
      65           70           75           80
Ile Arg Ser His Ala Gln Lys Phe Phe Ser Lys Leu Val Arg Gly Ser
      85           90           95
Ser Asn Lys Gly Val Ser
      100

```

<210> 2234

<211> 85

<212> PRT

<213> Pinus radiata

<400> 2234

```

Gly Ile Asp Met Asn Arg Gly Pro Ala Thr Asn Glu Ser Glu Tyr Ser
      1           5           10           15
Ser Val Phe Gln Ala Asp Ala Leu Arg Thr Ile Asp Thr Gly Ser Val
      20           25           30
Val Val Lys Arg Glu Arg Glu Arg Thr Phe Glu Leu Glu Ala Glu Arg
      35           40           45
Asp Arg Thr Cys Asp Val Ser Ser Arg Thr Ser Asp Glu Glu Glu Ile
      50           55           60
Gly Ser Thr Arg Lys Lys Leu Arg Leu Ser Lys Glu Gln Ser Ala Leu
      65           70           75           80
Leu Glu Glu Ser Phe
      85

```

<210> 2235

<211> 115
 <212> PRT
 <213> Pinus radiata

<400> 2235
 Asn Leu Glu Ser Leu Thr Leu Lys Glu Leu Gln Gln Leu Glu Lys Gln
 1 5 10 15
 Leu Gly Arg Ala Ile Lys Lys Ile Tyr Asn Lys Lys Met Lys Ile Ile
 20 25 30
 Ser Gln Cys Cys Lys Ser Leu Ser Glu Lys Val Arg Ser Leu Glu Glu
 35 40 45
 Glu Asn Ser Glu Leu Leu Thr Lys Leu Ile Pro Arg Ala Asp Ser Ser
 50 55 60
 Thr Ser Gly Ala Ala Leu Phe Val Asp Thr Ser Met Pro Lys Ser His
 65 70 75 80
 Ser Ala Thr Glu Ala Trp Arg Gln Leu Leu Gln Arg Val Leu Val Thr
 85 90 95
 Ala Ala Lys Met Ala Thr Thr Pro Pro Ala Arg His Ser Asn Ser Arg
 100 105 110
 Pro Asn His
 115

<210> 2236
 <211> 88
 <212> PRT
 <213> Pinus radiata

<400> 2236
 Gly Lys Ala Thr Ser Gly Ser Ala Asn Glu Ala Met Ser Gln Ser Gly
 1 5 10 15
 Asp Ser Gly Ser Asp Gly Ser Ser Glu Gly Ser Glu Glu Tyr Asn Thr
 20 25 30
 Gln Thr Glu Ser Gln Val Ala Arg Lys Arg Ser Phe Asp Gln Met Ile
 35 40 45
 Val Asp Gly Ala Asn Ala Gln Ser Thr Asn Ile Gln Ser Tyr Asn Ser
 50 55 60
 Gln Ala Gly Glu Pro Tyr Val Thr Ser Gly Gly His Ala Met Gly Asn
 65 70 75 80
 Pro Ile Ser Gln Ala Val Ala Ala
 85

<210> 2237
 <211> 66
 <212> PRT
 <213> Pinus radiata

<400> 2237
 Gln Leu Lys Trp Lys Glu Arg Ile Leu Thr Glu Glu Asn Leu Phe Leu
 1 5 10 15
 Arg Lys Lys Cys Gly Asp Glu His Val Asp Cys Ser Ala Phe Arg Thr
 20 25 30
 Pro Pro Ala Gln Leu Arg Ser Ile Gln Asn Ile Asp Val Glu Thr Gln
 35 40 45
 Leu Val Ile Arg Pro Pro Thr Val Gln Gln His Pro Asp Val Asp Ser
 50 55 60
 Pro Arg
 65

<210> 2238
 <211> 176
 <212> PRT

<213> Pinus radiata

<400> 2238

```

Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
 1      5      10
Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
 20      25
Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
 35      40      45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Asp
 50      55      60
Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile Leu Arg
 65      70      75      80
Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Met
 85      90      95
Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr His Leu
100      105      110
Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro
115      120      125
Leu Ser Glu Ser Glu Asp Ile Cys Ser Ser Pro Gly Asn Ser Glu Val
130      135      140
Ser Arg Lys Ser Gln Arg Glu Asn Asn Ala Glu Ile Pro Arg Lys Val
145      150      155      160
Ala Asp Gly Ala Val Asp Ile Gln Asp Lys Glu Glu Asp Ile Thr Glu
165      170      175

```

<210> 2239

<211> 105

<212> PRT

<213> Pinus radiata

<400> 2239

```

Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Thr Ala Asn
 1      5      10
Arg Gln Val Thr Phe Ser Lys Arg Lys Gly Gly Leu Leu Lys Ala
 20      25
His Glu Leu Ser Val Leu Cys Asn Ala Glu Ile Ala Leu Ile Val Phe
 35      40      45
Ser Asn Thr Gly Lys Leu His Asp Trp Ser Ser Ser Ser Met Lys Lys
 50      55      60
Val Met Glu Lys Tyr Gln Lys Ser Asp Gln Gly Leu Gly Leu Met Asp
 65      70      75      80
Tyr Gln Gln Gln Gln Leu Leu Cys Glu Met Lys Arg Ile Thr Lys Glu
 85      90      95
Asn Glu Ser Leu Arg Ala Arg Leu Arg
100      105

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<210> 2240

<211> 78

<212> PRT

<213> Pinus radiata

<400> 2240

```

Met Ser Asn Gly Arg Leu Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro
 1      5      10
Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr
 20      25      30
Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser
 35      40      45
Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val
 50      55      60

```

Glu His Arg Pro Phe Thr Pro Ser Glu Asp Ala Ala Ile Leu
65 70 75

<210> 2241
<211> 67
<212> PRT
<213> Pinus radiata

<400> 2241
Met Gly Arg Ala Leu Gly Arg Thr Glu Ile Lys Arg Ile Glu Asn Glu
1 5 10 15
Val Ser Arg Asn Val Ser Phe Arg Lys Arg Arg Arg Gly Leu Leu Lys
20 25 30
Lys Ala Ala Glu Leu Ser Ile Leu Cys Asp Ala Thr Val Gly Val Val
35 40 45
Val Phe Ser Pro Ala Gly Lys Leu Ser Glu Tyr Ala Ser Thr Ser Glu
50 55 60
Gln Met Asp
65

<210> 2242
<211> 131
<212> PRT
<213> Pinus radiata

<400> 2242
Ile Arg Asn Pro Thr Asn Arg His Ser Ser Phe Tyr Lys Arg Lys Gly
1 5 10 15
Gly Leu Leu Lys Lys Ala Phe Glu Leu Ala Val Leu Cys Asp Ala Glu
20 25 30
Val Ala Leu Ile Ile Phe Ser Glu Thr Gly Arg Ile Tyr Glu Phe Ala
35 40 45
Ser His Asp Asp Val Thr Thr Val Leu Ala Lys Tyr Arg Ile Gln Thr
50 55 60
Lys Thr Ala Gly Asn Ala Met Pro Ser Ser Leu Gln Lys Thr Glu Phe
65 70 75 80
Asp Gln Leu Gln Val Arg Met Leu Gln Glu Lys Ile Asp Asn Leu Glu
85 90 95
Lys Thr Lys Lys His Met Val Gly Asp Asn Leu Glu Ser Leu Thr Trp
100 105 110
Lys Glu Leu Gln Gln Val Glu Lys Lys Leu Ser Lys Ala Thr Lys Ile
115 120 125
Ile Val Ala
130

<210> 2243
<211> 29
<212> PRT
<213> Pinus radiata

<400> 2243
Gln Pro Val Ala Pro Glu Ser Ile Val Pro Pro His Gln Pro Pro His
1 5 10 15
Asn Gln Thr Pro Asn Gln Tyr Met Gln Gly Trp Trp Val
20 25

<210> 2244
<211> 107
<212> PRT
<213> Pinus radiata

<400> 2244

```

Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
1          5          10          15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
20          25          30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
50          55          60
Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile Ile Lys
65          70          75          80
Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
85          90          95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
100          105

```

<210> 2245

<211> 168

<212> PRT

<213> Pinus radiata

<400> 2245

```

Thr Ala Glu Glu Asp Arg Lys Leu Val Asn Phe Ile Thr Leu His Gly
1          5          10          15
His Gly Cys Trp Arg Glu Val Pro Lys Leu Ala Gly Leu Leu Arg Cys
20          25          30
Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Leu
35          40          45
Lys Arg Gly Leu Leu Ser Glu Ser Glu Glu Lys Leu Ile Ile Asp Leu
50          55          60
His Ala Ala Ile Gly Asn Arg Trp Ser Arg Ile Ala Ala Gln Leu Pro
65          70          75          80
Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr Arg Ile Lys
85          90          95
Lys Lys Leu Arg Gln Met Gly Ile Asp Pro Val Thr His Lys Pro Leu
100          105          110
Thr Gln Met Gln Met Gln Ser Thr Pro Ala Gln Thr Leu Leu Gln
115          120          125
Glu Asn Asp Thr Glu Gln Gln Gln Glu Gln His Asn Glu Pro Asp
130          135          140
Pro Asp Gln Asn Gln Ser Ser Asn Gly Thr Val Glu Thr Leu Val Ser
145          150          155          160
Arg Ala Arg Glu Pro His Asp His
165

```

<210> 2246

<211> 164

<212> PRT

<213> Pinus radiata

<400> 2246

```

Ser Asp Gly Thr Thr Thr Met Ser Thr Tyr Glu Arg Lys Ala Ser Leu
1          5          10          15
Arg Glu Phe Tyr Ala Val Ile Tyr Pro Ser Leu Leu Gln Leu Glu Gly
20          25          30
Gly Ile Thr Glu Met Glu Asp Asn Lys Gln Lys Leu Ile Cys Lys Glu
35          40          45
Arg Tyr Lys Lys Arg Val Asp Glu Glu Arg Arg His Leu Ser Glu Leu
50          55          60
Asp Leu Glu Arg Glu Lys Glu Cys Gly Ile Cys Met Glu Thr Gln Thr
65          70          75          80

```

Lys Val Val Leu Pro Asn Cys Ser His Ala Met Cys Leu Asn Cys Tyr
 85 90
 Arg Glu Trp His Ala Arg Ser Glu Ser Cys Pro Phe Cys Arg Asp Ser
 100 105 110
 Leu Lys Arg Val Asn Ser Thr Asp Leu Trp Ile Phe Thr Ser Asn Glu
 115 120 125
 Glu Val Val Asp Met Glu Thr Leu Gly Arg Glu Asn Leu Lys Arg Leu
 130 135 140
 Phe Asn Tyr Ile Asp Lys Leu Pro Leu Ile Val Pro Glu Ser Leu Phe
 145 150 155 160
 Tyr Val Tyr Asp

<210> 2247

<211> 414

<212> PRT

<213> Eucalyptus grandis

<400> 2247

Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu
 1 5 10 15
 Trp Ser Pro Glu Glu Asp Glu Lys Leu Arg His Ile Ser Gln Tyr
 20 25 30
 Gly His Gly Cys Trp Ser Ser Val Pro Lys Gln Ala Gly Leu Gln Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Ala Phe Ser Gln Asp Glu Glu Asp Leu Ile Ile Glu
 65 70 75 80
 Leu His Ala Ala Leu Gly Asn Lys Trp Ser Gln Ile Ala Ala Asn Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Leu Trp Asn Ser Cys Leu
 100 105 110
 Lys Lys Lys Leu Arg Gln Arg Gly Ile Asp Pro Val Ser His Arg Pro
 115 120 125
 Leu Ser Glu Val Glu Asn Ser Asp Asp Lys Asp Ala Thr Ser Gly Gln
 130 135 140
 Thr Gln Asp Lys Val Ser Arg Gly Ser Val Glu Leu Leu Ser Gln Leu
 145 150 155 160
 Asn Pro Gln Phe Ser Ser Ser Thr Thr Ala Arg Ser Ser Lys Asn Ser
 165 170 175
 Asn Leu Met Ala Pro Thr Leu Ser Lys Asp Thr Val Ala Asp Gly Phe
 180 185 190
 Val Ser Asn His Gln Glu Asn Ser Met Met Asn Ser Cys Ile Ser Asp
 195 200 205
 Phe Val Asp Asn Phe Ser Leu Gln Gln Leu Asn Tyr Ser Ser Ser Asp
 210 215 220
 Ser Arg Phe Ser Asn Leu Cys Phe Thr Gln Thr Gly Arg Ala His Gly
 225 230 235 240
 Asn Thr Ile Phe Ser Asp Phe Asn Ser Asn Val Ile Ser Ala Ile Ser
 245 250 255
 Pro Pro Ser Ser Asn Ser Leu Phe Pro Thr Ala Ser Met Gly Phe Asn
 260 265 270
 Phe Lys Pro Ser Asn Ala Val Pro Ser Ala Asn Ser Thr Ser Ser Ala
 275 280 285
 Ser Thr Gly Thr Ala Asp Phe His Asn Ser Gly Ser Tyr Phe Gly Asn
 290 295 300
 Ser Leu Val Ser Trp Gly Leu Leu Ala Asp Cys Gly Ser Pro Asp Lys
 305 310 315 320
 Glu Gly Ser Thr Ser Ile His Pro Leu Glu Val His Gln Pro Gly Asp
 325 330 335

```

Phe Lys Trp Ala Ala Glu Tyr Leu Gln Asn Pro Leu Phe Met Ala Ala
      340      345
Ala Leu Gln Asn Gln Ala Gln Glu Gln Ser Asn Leu Tyr Asn Gln Ile
      355      360
Lys Pro Glu Thr Gln Phe Pro Pro Asp His Ser Thr Thr Ser Met Trp
      370      375
Asp His Leu Gln Gly His Glu Ser Leu Asp Asn Ser Leu Asn Thr Cys
      385      390
Gly Lys Asp Ile Gln Arg Leu Thr Ala Leu Leu Gly His Asn
      405      410

```

<210> 2248
 <211> 205
 <212> PRT
 <213> Eucalyptus grandis

```

<400> 2248
Met Arg Tyr Pro Ala Pro Ala Ser Arg Gly Lys Ser Thr Ser
  1      5      10      15
Thr Ala Thr Pro Cys Cys Ser Lys Val Gly Ile Lys Arg Gly Pro Trp
  20      25      30
Thr Pro Glu Glu Asp Glu Val Leu Ala Ser Tyr Val Arg Arg Glu Gly
  35      40      45
Glu Gly Arg Trp Arg Thr Leu Pro Lys Arg Ala Gly Leu Gln Arg Cys
  50      55      60
Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Ser Val
  65      70      75
Lys Arg Gly Gln Ile Ala Pro Asp Glu Glu Asp Leu Ile Leu Arg Leu
  85      90      95
His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Ile Pro
  100     105     110
Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu Ser
  115     120     125
Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro Leu
  130     135     140
Leu Asn His Asn Pro Ser Ser Ser Leu Ala Ala His Leu Gln Asp Thr
  145     150     155
Tyr Asn Ala Ser Thr Phe Thr Pro Lys Ala Thr Tyr Pro Asn Pro Thr
  165     170     175
Val Pro Val Glu Glu Thr Gly Asp Glu Asn Asp Leu Lys Val Gly Arg
  180     185     190
Gln Pro Ala Gly Ser Ala Ser Lys Arg Gly Arg Cys Gln
  195     200     205

```

<210> 2249
 <211> 195
 <212> PRT
 <213> Eucalyptus grandis

```

<400> 2249
Met Asp Lys Lys Pro Asp Asp Asp Ser Gly Lys Ser Gln Asp Val Glu
  1      5      10      15
Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn
  20      25      30
Tyr Ile Ala Asn His Gly Glu Gly Ser Trp Asn Ser Leu Ala Lys Ala
  35      40      45
Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn
  50      55      60
Tyr Leu Arg Pro Asp Val Arg Arg Gly Asn Ile Thr Thr Glu Glu Gln
  65      70      75
Leu Leu Ile Met Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys

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      85                      90                      95
Ile Ala Lys His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe
      100                      105                      110
Trp Arg Thr Arg Ile Gln Lys His Ile Lys Gln Ala Glu Ala Phe Ser
      115                      120                      125
Gly Gln Ser Ser Glu Met Ser Asp Gln Ala Ser Thr Ser His Met Ser
      130                      135                      140
Ser Met Pro Glu Pro Met Glu Thr Tyr Asp Ser Pro Pro Ser Phe Gln
      145                      150                      155                      160
Gly Asn Asn Asn Met Glu Pro Leu Pro Val Asn Leu Ser Val Glu Ser
      165                      170                      175
Asn Glu Ala Tyr Trp Ser Met Asp Asp Leu Trp Ser Met Gln Leu Leu
      180                      185                      190
Asn Gly Asp
      195

```

<210> 2250

<211> 208

<212> PRT

<213> Eucalyptus grandis

```

      <400> 2250
Met Asp Lys Lys Pro Cys Tyr Arg Thr Gln Asp Pro Gln Val Arg Lys
      1                      5                      10                      15
Gly Pro Trp Thr Leu Glu Glu Asp Leu Ile Leu Met Asp Tyr Ile Ala
      20                      25                      30
Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ala Gly Leu
      35                      40                      45
Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg
      50                      55                      60
Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Ile
      65                      70                      75                      80
Ile His Leu Gln Ser Met Trp Gly Asn Arg Trp Ser Glu Ile Ala Lys
      85                      90                      95
His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg Thr
      100                      105                      110
Lys Ile Gln Lys His Ile Ile Lys Gln Ser Glu Thr Glu Ile Asn Asp
      115                      120                      125
Leu Thr Ile Pro Pro Ser Ser Ala Asn Ala Cys Thr Asp His Arg Gly
      130                      135                      140
Val Ser Ala Ala Asn Thr Ile Glu Ile Ala Cys Ser Pro Pro Ser Asp
      145                      150                      155                      160
Gln Gly Gly Ser Gly Glu Thr Met Leu Ser Ala Leu Pro Pro Ala Gln
      165                      170                      175
Glu Pro Asn Asp Ser Ala Cys Trp Ser Val Glu Asp Leu Trp Pro Ile
      180                      185                      190
Gln Ser Leu Ile Ser Gly Met Gly Asp Asp Ala Gln Tyr Tyr Ser Val
      195                      200                      205

```

<210> 2251

<211> 147

<212> PRT

<213> Eucalyptus grandis

```

      <400> 2251
Met Asn Ser Thr Thr Thr Gln Phe Val Ser Ser Arg Arg Met Gly Met
      1                      5                      10                      15
Tyr Asp Pro Ile His Gln Ile Gly Met Trp Asp Glu Asn Phe Lys Gln
      20                      25                      30
Asn Gly Asn Pro Asn Ala Pro Pro Ala Leu Ile Ile Pro Met His Ala
      35                      40                      45

```

Asn Leu Asp Asn Gln Ser Glu Asp Thr Ser His Gly Ser Gln Asp Thr
 50 55 60
 Ala Gly Lys Tyr Glu Gln Glu Thr Ser Lys Pro Tyr Asp Lys Val Gln
 65 70 75 80
 Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser Arg Leu Arg
 85 90 95
 Lys Lys Ala Tyr Val Gln Gln Leu Glu Ala Ser Arg Leu Lys Leu Met
 100 105 110
 Gln Leu Glu Gln Glu Val Asp Arg Ala Arg Gln Gln Gly Val Tyr Met
 115 120 125
 Ala Ser Gly Val Asp Ser Ala Tyr Pro Gly Tyr Gly Gly Cys Leu Asn
 130 135 140
 Ser Gly Ile
 145

<210> 2252
 <211> 43
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2252
 Met Met Ala Val Thr Ser Ala Cys Lys Asp Lys Met Gly Ile Asp Asn
 1 5 10 15
 Gly Lys Tyr Val Arg Tyr Thr Pro Glu Gln Val Glu Ala Leu Glu Arg
 20 25 30
 Leu Tyr His Glu Cys Pro Lys Pro Ser Ser Leu
 35 40

<210> 2253
 <211> 54
 <212> PRT
 <213> *Pinus radiata*

<400> 2253
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
 20 25 30
 Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Cys Leu Pro
 35 40 45
 Ala Leu Cys Phe Leu Asn
 50

<210> 2254
 <211> 66
 <212> PRT
 <213> *Pinus radiata*

<400> 2254
 Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His
 20 25 30
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Asp Tyr Glu
 35 40 45
 Phe Ile Phe Ser Ser Arg Thr Cys Lys Lys Phe Ser Val Phe Leu Phe
 50 55 60
 Phe Gly
 65

<210> 2255

<211> 67
 <212> PRT
 <213> Pinus radiata

<400> 2255
 Met Gly Arg Ser Pro Cys Cys Ala Lys Glu Gly Leu Asn Arg Gly Ala
 1 5 10 15
 Trp Thr Lys Thr Glu Asp Ile Ile Leu Ser Glu Tyr Ile Arg Ile His
 20 25 30
 Gly Asp Gly Gly Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Lys Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp
 50 55 60
 Ile Lys Arg
 65

<210> 2256
 <211> 226
 <212> PRT
 <213> Pinus radiata

<400> 2256
 Met Gly Arg Ala Pro Cys Cys Ser Asn Asp Asp Arg Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Leu Ile Leu Lys
 65 70 75 80
 Leu His Ala Leu Leu Gly Asn Asn Arg Trp Ser Leu Ile Ala Gly Arg
 85 90 95
 Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Ser His
 100 105 110
 Leu Lys Arg Lys Leu Ile Ser Met Gly Ile Asp Pro Leu Thr His Arg
 115 120 125
 Pro Phe Gln Lys Thr Ser His His His Pro Ser Pro Pro Gln Asn Val
 130 135 140
 Arg Glu Ala Glu Thr Thr Pro Ser Ile Gly Ile Val Gln Asp Phe Phe
 145 150 155 160
 Arg Cys Pro Ser Glu Leu Ser Thr Lys Ser Glu Gln Ile Ser Asp Ala
 165 170 175
 Ala Ser Gly Leu Ala Gln Asp Glu Gln Pro His Pro Asn Leu Asn Leu
 180 185 190
 Asn Leu Glu Leu Ser Ile Ala Arg Ser Ser Val His Arg Val Ala Glu
 195 200 205
 Lys Glu Asp Val Val Asn Ser Gln Gln Gly Glu Ser Asn Leu Ser Glu
 210 215 220
 Gly Lys
 225

<210> 2257
 <211> 101
 <212> PRT
 <213> Pinus radiata

<400> 2257
 Met Gly Arg Ala Pro Cys Cys Ser Asn Gly Asp Arg Asn Lys Gly Ala
 1 5 10 15

Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Asn Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Cys Pro Asp
 50 55 60
 Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile Leu Lys
 65 70 75 80
 Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp
 100

<210> 2258

<211> 412

<212> PRT

<213> Pinus radiata

<400> 2258

Met Gly Arg Thr Pro Cys Cys Glu Lys Asn Ile Gly Leu Lys Lys Gly
 1 5 10 15
 Pro Trp Thr Pro Glu Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Ser
 20 25 30
 His Gly His Gly Ser Trp Arg Ala Leu Pro Lys Arg Ala Gly Leu Leu
 35 40 45
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro
 50 55 60
 Asp Ile Lys Arg Gly Gln Phe Ser Phe Glu Glu Glu Gln Thr Ile Ile
 65 70 75 80
 Glu Leu His Ala Val Leu Gly Asn Lys Trp Ser Thr Ile Ala Gly His
 85 90 95
 Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His
 100 105 110
 Leu Lys Lys Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His Arg
 115 120 125
 Pro Arg Thr Asp Leu Leu Ala Phe Ser Asn Ile Gln Ser Ser Ile Phe
 130 135 140
 Asn Thr Pro Gly Phe Gly His Met Ala Gln Trp Glu Ser Ala Arg Leu
 145 150 155 160
 Glu Ala Glu Ala Arg Leu Thr Gly Glu Tyr Leu Arg Gln Ala Leu Phe
 165 170 175
 Met Ala Gly Asn Gly Ser Ala Thr Ala Asp Leu Leu Met Arg Pro Cys
 180 185 190
 Lys Ser Glu Phe Gly Asn Asp Gln Phe Asn Leu Thr Lys Asn Met Gly
 195 200 205
 Asn Pro Pro Trp Ile Gln Gln Pro Gly Met Ala Leu Asp Tyr Lys Gly
 210 215 220
 Ala Val Pro Gln Ser Leu Glu Gln Phe Leu Gln Thr Asn Val Cys Ser
 225 230 235 240
 Ala Ser Asp Ile Asn Gly Gly Gly Cys Leu Ser His Glu Gly Gly Phe
 245 250 255
 Asn Ile Thr Lys Phe Ala Ser Pro Cys Ser Thr Leu Asp Gly Ile Gln
 260 265 270
 Ile Lys Thr Glu Pro Gln Ser Leu Cys Gly Pro Gln Val Val Lys Asn
 275 280 285
 Asp Ser Gln Phe Leu His Ser Glu Gly Asp Leu Arg Lys Gln Ala Met
 290 295 300
 Leu Asp Met Asn Val Gly Cys Asn Val Leu Ile Asn Met Asn Ala Glu
 305 310 315 320
 Ser Lys Val Ser Phe Gly His Asn Gly Ile Ile Thr Asp Gln Glu Tyr
 325 330 335

Asn Asn Leu Gly Gln Ile Asp Asn Asn Asn His Leu Ser His Ala Ala
 340 345 350
 Thr Thr Leu Trp Pro Val Glu Gly Gln Leu Gln Ala Ile Ala Ser Ala
 355 360 365
 Ser Met Pro Gly Leu Ile Ser Ser Thr Ser Cys Thr Ser Asn Asn Ile
 370 375 380
 Tyr Ser Gln Pro Gly Leu Ile Pro Leu Leu Asn Ser Thr Thr Ser Ser
 385 390 395 400
 Met Gly Asp Thr Asn Ser Tyr Arg Glu Ala Gln Pro
 405 410

<210> 2259

<211> 391

<212> PRT

<213> Pinus radiata

<400> 2259

Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
 20 25 30
 Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Asp
 50 55 60
 Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile Leu Arg
 65 70 75 80
 Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Met
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr His Leu
 100 105 110
 Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro
 115 120 125
 Leu Ser Glu Ser Glu Asp Ile Cys Ser Ser Pro Gly Asn Ser Glu Val
 130 135 140
 Ser Arg Lys Ser Gln Arg Glu Asn Asn Ala Glu Ile Pro Arg Lys Val
 145 150 155 160
 Ala Asp Gly Ala Val Asp Ile Gln Asp Lys Glu Glu Asp Ile Thr Glu
 165 170 175
 Asp Gln Thr Ser Ala Gln Leu Pro Glu Asn Gln Leu Leu Glu Thr Ser
 180 185 190
 Asn Ser Gln Cys Pro Ser Val Ala Thr Asp Phe Val Pro Gln Ala Pro
 195 200 205
 Ser Ile Pro Ser Thr Ala Tyr Ser Phe Gln Gln Ser Thr Thr Ser Ser
 210 215 220
 Val Pro Gly Gly Val Ser Asp Ser Val Asp Val Asn His Asn Lys Gly
 225 230 235 240
 Ser Lys Gln Val Pro Phe Pro Leu Ser Asn Thr Ala Cys Phe Asn Ser
 245 250 255
 Ser Ala Gln Gly Val Ala Gly Asp Tyr Leu Asp Gln Tyr Leu Met Lys
 260 265 270
 Asn Leu Val Thr Asn Ser Asn Asp Leu Ile Thr Ser Thr Val Arg Leu
 275 280 285
 Ser Ser Ala Leu Gln Thr Ala Pro Phe Val Gly Gln Phe Asp Ser Asn
 290 295 300
 His Val Phe Met Ser Gly Asn Ala Ser Leu Asn Glu Lys His Gln Met
 305 310 315 320
 Pro Gln Asn Ser Gln Ala Leu Glu Met Asp Pro His His Ser Phe Ile
 325 330 335
 Ala His Pro Ser Glu Glu Gly Thr Tyr Asp Lys Leu Asn His Thr Arg
 340 345 350

Cys Ala Ala Ser Asp Gln Val Thr Ser Phe Asn Tyr Pro Tyr Leu Ile
 355 360 365
 Ser His Thr Val Thr Gly Ser Ala Leu Gly Asp Phe Asn Pro Asp Ile
 370 375 380
 Phe Pro Pro Phe Val Glu Ser
 385 390

<210> 2260
 <211> 144
 <212> PRT
 <213> Pinus radiata

<400> 2260
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
 20 25 30
 Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile Ile Lys
 65 70 75 80
 Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile
 100 105 110
 Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His Arg Pro
 115 120 125
 Leu Gly Gln Pro Asn Asn Thr Pro Val Thr Arg Pro Val Leu Glu His
 130 135 140

<210> 2261
 <211> 255
 <212> PRT
 <213> Pinus radiata

<400> 2261
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val Ile Lys
 65 70 75 80
 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile
 100 105 110
 Lys Arg Lys Leu Leu Asn Arg Gly Leu Asp Pro Gln Ser His Arg Pro
 115 120 125
 Leu Gly Gln Pro His Asn Ser Asn Thr Thr Cys Pro Ser Leu Pro Ala
 130 135 140
 Leu Glu His Glu Ile Leu Val Phe Gln Arg Pro Arg Thr Pro Glu Ile
 145 150 155 160
 Ala Asp Phe Phe Gln Tyr Glu Arg Ser Glu Ser Ser Pro Met Glu Pro
 165 170 175
 Ala Thr Ser Lys Asp Ala Glu Glu His Pro Asp Leu Asn Leu Asp Leu

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      180      185      190
Cys Ile Ser Leu Pro Val His Ser Pro Pro Ala Thr Ser Arg Ala Ser
      195      200      205
Ser Val Asp Gly Thr Val Asp Ser Lys Pro Asn Ser Val Ser Cys His
      210      215      220
Met Gly Leu Gln Val Asn Tyr Gly Val Gln Cys Glu Asn Arg Tyr Cys
      225      230      235      240
Glu Glu Ser Ala Ser Gly Val Ser Ser Phe Tyr Thr Leu Val Leu
      245      250      255

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<210> 2262
<211> 162
<212> PRT
<213> Pinus radiata

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      <400> 2262
Met Gly Thr Gly Glu Met Gly Thr Pro Ala Lys Thr Thr Lys Ala Ser
 1      5      10      15
Thr Pro Gln Glu Gln Pro Pro Thr Ser Thr Ala Met Leu Tyr Pro Asp
      20      25      30
Trp Ala Ala Ala Phe Gln Ala Tyr Tyr Asn Ser Gly Thr Thr Pro Pro
      35      40      45
Pro Pro Pro Ala Tyr Phe His Ser Ser Val Ala Ser Ser Pro Gln Pro
      50      55      60
His Pro Tyr Met Trp Gly Gly Gln Pro Leu Met Pro Pro Tyr Gly Thr
      65      70      75      80
Leu Pro Pro Pro Tyr Ala Ala Met Tyr His His Gly Ser Met Tyr Ala
      85      90      95
His Pro Ser Met Pro Pro Gly Ala His Pro Phe Ala Pro Tyr Val Met
      100      105      110
Thr Ser Ser Leu Ser Thr Thr Glu Gly Ala Pro Val Gly Thr Thr Ser
      115      120      125
Gly Ala Asp Ala Glu Gly Lys Pro Ser Glu Pro Lys Asp Gln Thr Leu
      130      135      140
Leu Lys Arg Ser Lys Gly Ser Leu Gly Ser Leu Asn Met Leu Thr Gly
      145      150      155      160
Lys Ile

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<210> 2263
<211> 193
<212> PRT
<213> Pinus radiata

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      <400> 2263
Met Gly Cys Asn Gln Ser Lys Val Glu Ser Glu Glu Glu Val Val Lys
 1      5      10      15
Ser Lys Glu Arg Lys Gln Phe Met Lys Glu Ser Val Ala Ala Arg Asn
      20      25      30
Ala Phe Ala Ala Ala His Ser Ala Ser Ile Thr Ser Leu Lys Asn Ile
      35      40      45
Gly Ala Ala Leu Asn Asp Tyr Gly Gln Gly Glu Ser Lys Glu Ser Leu
      50      55      60
Ser Gln Gly His Leu Pro Val Pro His Ile Tyr Gly Asp Pro Leu Pro
      65      70      75      80
Pro Ala Pro Pro Leu Pro Pro Leu Leu Pro Pro Pro Arg Pro Asp Glu
      85      90      95
His Pro Ala Arg Pro Leu Glu Arg Ser Ala Ser Ala Pro Ala Ile Ala
      100      105      110
Leu Gln Gln Gln Ala Glu Glu Asp Arg Asn Pro Glu Ala Asn Ala Gly
      115      120      125

```

Ala Ser Ile Pro Glu Gly Glu Asp Glu Val Glu Glu Glu Asp
 130 135 140
 Glu His Leu Val Glu Val Ser His Ser Val Thr Ser Phe Asn Pro Pro
 145 150 155
 Pro Arg Pro Pro Pro Ser Ser Glu Pro Pro Pro Pro Leu Pro
 165 170 175
 Pro Leu Thr Asn Gln Trp Asp Phe Phe Asp Asp Asn Ser Tyr Phe Glu
 180 185 190
 Arg

<210> 2264
 <211> 128
 <212> PRT
 <213> Pinus radiata

<400> 2264
 Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Ala Thr Asn
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Gly Gly Leu Lys Lys Lys Ala
 20 25 30
 Gln Glu Leu Ser Val Leu Cys Asn Ala Glu Val Ala Leu Ile Ile Phe
 35 40 45
 Ser Ser Thr Gly Lys Leu His Glu Trp Ser Ser Ser Ser Phe Phe
 50 55 60
 Met Leu Gln Lys Ser Met Lys Lys Ile Leu Glu Arg Tyr Gln Lys Ser
 65 70 75 80
 Glu Gln Gly Leu Gly Leu Met Asp Tyr Gln His Gln Gln Leu Leu Cys
 85 90 95
 Glu Met Arg Arg Ile Thr Lys Glu Asn Glu Ser Leu Gln Glu Arg Leu
 100 105 110
 Arg His Met Asn Gly Glu Glu Val Asn Ser Leu Lys Leu Pro Glu Leu
 115 120 125

<210> 2265
 <211> 181
 <212> PRT
 <213> Pinus radiata

<400> 2265
 Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
 35 40 45
 Ser Ser Arg Gly Lys Leu Tyr Glu Phe Gly Ser Ala Gly Met Leu Lys
 50 55 60
 Thr Leu Glu Arg Tyr Gln Lys Cys Ser Tyr Val Leu Gln Asp Ala Thr
 65 70 75 80
 Val Ser Asp Arg Glu Ala Gln Asn Trp His Gln Glu Val Gly Lys Leu
 85 90 95
 Lys Ala Arg Val Glu Leu Leu Gln Arg Ser Gln Arg His Leu Leu Gly
 100 105 110
 Glu Asp Leu Gly Pro Leu Ser Ile Lys Glu Leu Gln Gln Leu Glu Arg
 115 120 125
 Gln Leu Glu Val Ala Leu Thr His Val Arg Ser Arg Lys Thr Gln Val
 130 135 140
 Met Leu Glu Met Met Asp Glu Leu Arg Arg Lys Glu Arg Ile Leu Gln
 145 150 155 160
 Glu Val Asn Lys Ser Leu Arg Lys Lys Leu Gln Glu Ala Glu Gly Gln

165
 Ala Phe Asn Ala Met
 180
 <210> 2266
 <211> 107
 <212> PRT
 <213> Pinus radiata
 <400> 2266
 Met Asp Leu Met Glu Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg
 1 5 10 15
 Arg Thr Val Arg Gly Lys Thr Gln Leu Lys Arg Ile Glu Asn Gly Thr
 20 25 30
 Ser Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys
 35 40 45
 Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val
 50 55 60
 Phe Ser Pro Arg Gly Lys Arg Tyr Glu Phe Ala Asn Pro Ser Met Gln
 65 70 75 80
 Lys Met Leu Ala Arg Tyr Glu Asn Phe Ser Glu Gly Ser Lys Ala Thr
 85 90 95
 Ser Thr Ala Lys Glu Gln Asp Val Gln Gly Leu
 100 105
 <210> 2267
 <211> 134
 <212> PRT
 <213> Pinus radiata
 <400> 2267
 Ala Arg Gly Lys Thr Gln Met Arg Lys Ile Glu Ser Ala Thr Ser Arg
 1 5 10 15
 Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Met Lys Lys Ala Tyr
 20 25 30
 Glu Leu Ser Val Leu Cys Asp Ala Gln Leu Gly Leu Ile Val Phe Ser
 35 40 45
 Pro Arg Gly Lys Val Tyr Glu Phe Ser Ser Thr Cys Met Gln Lys Met
 50 55 60
 Leu Ala Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asp Thr Ser Thr Ser
 65 70 75 80
 Lys Glu Gln Asp Val Gln Cys Leu Lys Arg Glu Ser Ala Asn Met Glu
 85 90 95
 Glu Arg Ile Glu Ile Leu Glu Ser Met Gln Arg Lys Met Leu Gly Glu
 100 105 110
 Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln
 115 120 125
 Val Glu Arg Gly Leu Arg
 130
 <210> 2268
 <211> 138
 <212> PRT
 <213> Pinus radiata
 <400> 2268
 Met Gly Arg Gly Arg Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Asn
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe

```

      35          40          45
Ser Thr Arg Gly Lys Leu Tyr Glu Phe Ala Ser Ser Met Asn Lys
  50          55          60
Thr Leu Glu Arg Tyr Glu Lys Cys Ser Tyr Ala Met Gln Asp Thr Thr
  65          70          75          80
Gly Val Ser Asp Arg Glu Ala Gln Asn Trp His Gln Glu Val Thr Lys
      85          90          95
Leu Lys Gly Lys Val Glu Leu Leu Gln Arg Ser Gln Arg His Leu Leu
      100          105          110
Gly Glu Asp Leu Gly Pro Leu Asn Val Lys Glu Leu Gln Gln Leu Glu
      115          120          125
Arg Gln Leu Glu Val Ala Leu Thr His Leu
      130          135

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<210> 2269

<211> 141

<212> PRT

<213> Pinus radiata

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      <400> 2269
Met Gly Lys Lys Arg Val Glu Leu Lys Arg Ile Gln Asn Pro Ser Ser
  1          5          10          15
Arg His Ala Thr Phe Ser Lys Arg Lys Asn Gly Leu Leu Lys Ala
      20          25          30
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
      35          40          45
Ser Glu Thr Gly Lys Ile Tyr Glu Phe Ala Ser Asn Asn Asp Met Ala
      50          55          60
Ala Ile Leu Gly Lys Tyr Arg Val His Glu Glu Gly Thr Glu Thr Ser
      65          70          75          80
Ser Pro Thr Ser Leu Gln Asn Val Lys Tyr His Glu Ser Gly Leu Glu
      85          90          95
Lys Leu Gln Glu Lys Leu Thr Ala Leu Gln Lys Lys Glu Lys Asn Leu
      100          105          110
Ile Gly Glu Asp Leu Glu Val Leu Thr Met Lys Glu Leu Gln Arg Leu
      115          120          125
Glu Lys Gln Leu Gln Ile Gly Ile Lys Arg Leu Val Ile
      130          135          140

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<210> 2270

<211> 135

<212> PRT

<213> Pinus radiata

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      <400> 2270
Met Gly Lys Lys Val Glu Val Lys Leu Ile Gln Asn Pro Thr Ser
  1          5          10          15
Arg Gln Gly Cys Phe Tyr Asn Arg Lys Cys Gly Leu Leu Lys Ala
      20          25          30
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
      35          40          45
Ser Gln Thr Gly Lys Ile Tyr Glu Phe Ala Ser His Asp Asp Val Asn
      50          55          60
Ala Ile Leu Ala Lys Tyr Arg Ile Gln Thr Gly Thr Thr Thr Asn Ala
      65          70          75          80
Met Pro Ser Ser Leu Gln Asn Thr Glu Pro Glu Thr Leu His Glu Glu
      85          90          95
Thr Asn Met Leu Gly Lys Arg Lys Lys Val Glu Lys Leu His Glu Lys
      100          105          110
Ile Asn Met Leu Glu Lys Arg Gly Lys Asn Met Val Gly Glu Asn Leu
      115          120          125

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Glu Ser Leu Thr Val Asn Glu
130 135

<210> 2271
<211> 118
<212> PRT
<213> Pinus radiata

<400> 2271
Met Ala Arg Gly Lys Thr Gln Met Lys Lys Ile Glu Asn Val Thr Ser
1 5 10 15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
20 25 30
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Ile Val Phe
35 40 45
Ser Pro Ser Gly Lys Leu Tyr Glu Phe Ser Arg Pro Cys Met Gly Lys
50 55 60
Leu Leu Glu Lys Tyr Glu Lys Asn Ser Arg Glu Ser Gly Ile Asn Asn
65 70 75 80
Ala Ala Lys Glu Lys Asp Thr Gln His Ser Lys Arg Glu Ile Ala Asn
85 90 95
Met Glu Glu Lys Ile Arg Ile Leu Glu Ser Thr Glu Arg Lys Met Leu
100 105 110
Gly Gln Asn Leu Ala Ser
115

<210> 2272
<211> 147
<212> PRT
<213> Pinus radiata

<400> 2272
Met Asp Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg Arg Thr Val
1 5 10 15
Arg Gly Lys Thr Gln Met Lys Arg Ile Glu Asn Ala Thr Ser Arg Gln
20 25 30
Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala Tyr Glu
35 40 45
Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Met Val Phe Ser Pro
50 55 60
Arg Gly Lys Leu Tyr Glu Phe Ala Asn Pro Ser Met Gln Lys Met Leu
65 70 75 80
Glu Arg Tyr Glu Lys Cys Ser Glu Gly Ser Lys Thr Thr Ser Ile Ala
85 90 95
Lys Glu Glu Asp Pro Lys Ala Leu Lys Arg Glu Ile Ala Asn Met Glu
100 105 110
Glu Arg Ile Glu Ile Leu Glu Arg Thr Gln Arg Lys Met Leu Gly Glu
115 120 125
Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln
130 135 140
Val Glu Arg
145

<210> 2273
<211> 113
<212> PRT
<213> Pinus radiata

<400> 2273
Met Gly Arg Gly Lys Ile Glu Ile Lys Lys Ile Glu Asn Ser Val His
1 5 10 15

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Arg Gln Val Thr Phe Cys Lys Arg Arg Gly Gly Leu Met Lys Lys Ala
      20      25      30
Tyr Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ala Leu Ile Val Phe
      35      40      45
Ser Ser Arg Gly Lys Leu Tyr Glu Leu Gly Thr Ser Asn Asn Asn Asn
      50      55      60
Asn Ser Met Arg Ser Ile Leu Glu Arg Tyr Gln Lys Cys Ser Gln Thr
      65      70      75      80
Ala Lys His Met Asn Phe Ser Asn Asn Thr Ser Asp Glu Lys Met Lys
      85      90      95
Gln Glu Ile Asn Leu Leu Lys Gln Gln Ile Gly Ser Ala Lys Leu Thr
      100      105      110
Asn

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<210> 2274
<211> 97
<212> PRT
<213> Pinus radiata

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<400> 2274
Ser Trp Lys Ala Asn Pro Cys Thr Val Pro Ser Ser Arg Ile Gly Gly
 1      5      10      15
Phe Gly Gly Gly Gln Val Ile Leu Pro Leu Ala His Thr Val Glu His
      20      25      30
Glu Glu Phe Leu Glu Val Ile Lys Leu Glu Asn His Gly Leu Thr Gln
      35      40      45
Glu Glu Ala Leu Leu Ser Arg Asp Met Phe Leu Leu Gln Leu Cys Ser
      50      55      60
Gly Leu Asp Glu Asn Ala Val Gly Ala Cys Ala Glu Leu Val Phe Ala
      65      70      75      80
Pro Ile Asp Ala Ser Leu Ala Asp Ser Ser Pro Leu Leu Pro Ser Gly
      85      90      95
Phe

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<210> 2275
<211> 157
<212> PRT
<213> Pinus radiata

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<400> 2275
Ser Val Asp Val Leu Thr Ala Phe Ser Thr Gly Asn Gly Gly Thr Ile
 1      5      10      15
Glu Leu Leu Tyr Met Gln Met Tyr Ala Pro Thr Thr Leu Ala Ser Ala
      20      25      30
Arg Asp Phe Trp Thr Leu Arg Tyr Thr Ser Val Leu Glu Asp Gly Ser
      35      40      45
Leu Val Val Cys Glu Arg Ser Leu Ser Gly Thr Gln Gly Gly Pro Ser
      50      55      60
Met Pro Ala Val Gln Gln Phe Val Arg Ala Glu Met Gln Pro Ser Gly
      65      70      75      80
Tyr Leu Ile Arg Pro Cys Glu Gly Gly Gly Ser Leu Ile His Ile Val
      85      90      95
Asp His Met Asp Leu Glu Pro Trp Ser Val Pro Glu Val Leu Arg Pro
      100      105      110
Leu Tyr Glu Ser Ser Thr Val Leu Ala Gln Lys Val Thr Met Ser Ala
      115      120      125
Leu Arg His Leu Arg Gln Ile Ala Gln Glu Ala Ser Ser Asp Val Val
      130      135      140
Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Thr Phe

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145

150

155

<210> 2276
 <211> 327
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2276
 Met Val Ser Val Asn Pro Asn Pro Ala Gln Gly Phe Tyr Phe Phe Asp
 1 5 10 15
 Pro Ala Asn Thr Arg Ile His Gly Val Asn Ala Gly Ser Ala Ala Glu
 20 25 30
 Gly Gly Gly Ala Ala Pro Pro Tyr Ala Glu Asp Pro Ser Lys Lys Val
 35 40 45
 Arg Lys Pro Tyr Thr Ile Thr Lys Ser Arg Glu Ser Trp Thr Glu Gln
 50 55 60
 Glu His Asp Lys Phe Leu Glu Ala Leu His Leu Phe Asp Arg Asp Trp
 65 70 75 80
 Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr Val Ile Gln Ile Arg
 85 90 95
 Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln Lys Asn Gly Thr Ser
 100 105 110
 Glu His Val Pro Pro Pro Arg Pro Lys Arg Lys Ala Ala His Pro Tyr
 115 120 125
 Pro Gln Lys Ala Pro Lys Ala Pro Val Val Ser Gln Val Asn Gly Pro
 130 135 140
 Phe Gln Val Ser Ser Ala Phe Leu Glu Pro Gly His Ile Val Arg Pro
 145 150 155 160
 Asp Gly Ser Ala Leu Leu Gly Asn Ser Arg Thr Ser Val Ala Leu Ser
 165 170 175
 Ser Trp Ser His Asn Ser Val Pro Ala Met Ser Ala Ser Gln Gly Thr
 180 185 190
 Lys Asp Val Gly Ile Ser Gly Pro Val Pro Ser Asn Cys Cys Asn
 195 200 205
 Ser Ser Ser Asn Asp Ser Thr Pro Arg Ser Trp Pro Asn Ala Gln Ala
 210 215 220
 Ile Glu Pro Leu Asp Gln Gln Lys His Leu Arg Val Met Pro Asp Phe
 225 230 235 240
 Ala Gln Val Tyr Arg Phe Ile Gly Ser Val Phe Asp Pro Asp Ala Gly
 245 250 255
 Gly His Leu Gln Arg Leu Lys Gln Met Asp Pro Ile Asn Leu Glu Thr
 260 265 270
 Val Val Leu Leu Met Lys Asn Leu Ser Ala Asn Leu Thr Ser Pro Glu
 275 280 285
 Phe Glu Lys Tyr Gln His Gly Leu Phe Ala Ser Tyr Glu Gly Gly Pro
 290 295 300
 Glu Lys Ser Lys Ser Gly Gly Ser Phe Lys Leu Leu Pro Glu Lys Ser
 305 310 315 320
 Gly Ser Leu Ile Leu Ser Ala
 325

<210> 2277
 <211> 225
 <212> PRT
 <213> *Pinus radiata*

<400> 2277
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
 20 25 30

Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile Ile Lys
 65 70 75 80
 Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile
 100 105 110
 Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His Arg Pro
 115 120 125
 Leu Gly Gln Pro Asn Asn Thr Pro Val Thr Arg Pro Val Leu Glu His
 130 135 140
 Glu Ile Pro Ala Phe Gln Asn Pro Ala Thr Pro Glu Ile Ala Asp Leu
 145 150 155 160
 Leu Gln His His Arg Leu Glu Ser Ser Pro Ile Lys Pro Ala Ala Ser
 165 170 175
 Asp Ala Glu Glu His Pro Asp Leu Asn Leu Asn Leu Cys Ile Ser Leu
 180 185 190
 Pro Ser Asn Ser Ala Pro Ala Val Asn Arg Val Ser Ser Val Asp Thr
 195 200 205
 Thr Val Asp Ser Asn Ser Asn Ser Gly Asp Gly Leu Cys Trp Gln Phe
 210 215 220
 Leu
 225

<210> 2278

<211> 69

<212> PRT

<213> Pinus radiata

<400> 2278

Met Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg
 1 5 10 15
 Glu His Arg Ser Glu Trp Ala Asp Cys Asn Ile Asp Ala Tyr Ser Ser
 20 25 30
 Ala Thr Met Lys Ala Asn Ala Tyr Asn Val Pro Gly Ser Leu Gly Gly
 35 40 45
 Ile Thr Gly Ser Gln Val Ile Leu Pro Leu Ala His Thr Val Glu His
 50 55 60
 Glu Glu Phe Leu Glu
 65

<210> 2279

<211> 65

<212> PRT

<213> Eucalyptus grandis

<400> 2279

Met Ala Arg Phe Pro Arg Val Asp Lys Ser Asn Ser Lys Lys Thr Val
 1 5 10 15
 Lys Lys Gly Ala Trp Ser Ala Glu Glu Asp Gln Lys Leu Val Ala Tyr
 20 25 30
 Ile Lys Arg Tyr Gly Ile Trp Asn Trp Thr His Met Ala Glu Pro Ala
 35 40 45
 Gly Leu Ala Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr
 50 55 60
 Leu
 65

<210> 2280
 <211> 39
 <212> PRT
 <213> Eucalyptus grandis

<400> 2280
 Pro Asn Ile Lys His Gly Asn Ile Thr Gln Glu Glu Glu Glu Ile Ile
 1 5 10 15
 Ile Asn Leu His Arg Val Leu Gly Asn Arg Trp Ala Ser Ile Ala Ser
 20 25 30
 Arg Leu Ser Gly Arg Thr Asp
 35

<210> 2281
 <211> 59
 <212> PRT
 <213> Eucalyptus grandis

<400> 2281
 Arg Lys Pro Cys Asp Lys Gln Asp Thr Asn Lys Gly Ala Trp Ser
 1 5 10 15
 Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Arg Lys His Gly Glu
 20 25 30
 Gly Cys Trp Arg Thr Leu Pro Lys Ala Ala Gly Leu Leu Arg Cys Gly
 35 40 45
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50 55

<210> 2282
 <211> 48
 <212> PRT
 <213> Eucalyptus grandis

<400> 2282
 Pro Asp Leu Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile
 1 5 10 15
 Ile Lys Leu His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly
 20 25 30
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser
 35 40 45

<210> 2283
 <211> 19
 <212> PRT
 <213> Eucalyptus grandis

<400> 2283
 Cys Cys Ser Lys Lys Ala Val Lys Arg Gly Phe Trp Ser Pro Glu Glu
 1 5 10 15
 Asp Leu Lys

<210> 2284
 <211> 45
 <212> PRT
 <213> Eucalyptus grandis

<400> 2284
 Trp Thr Arg Glu Glu Asp Asn Leu Leu Ile His Ser Ile Thr Cys His
 1 5 10 15
 Gly Glu Gly Arg Trp Asn Met Leu Ala Lys Ser Ala Gly Leu Lys Arg

20 25 30
 Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
 35 40 45

<210> 2285
 <211> 57
 <212> PRT
 <213> Eucalyptus grandis

<400> 2285
 Arg Pro Asp Ile Lys Arg Gly Asn Leu Thr Pro Gln Glu Gln Leu Met
 1 5 10 15
 Ile Leu Glu Leu His His Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala
 20 25 30
 Gln Tyr Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg
 35 40 45
 Thr Arg Val Gln Lys Gln Ala Arg Gln
 50 55

<210> 2286
 <211> 57
 <212> PRT
 <213> Eucalyptus grandis

<400> 2286
 Met Ala Ser Arg Lys Glu Val Asp Arg Ile Lys Gly Pro Trp Ser Pro
 1 5 10 15
 Glu Glu Asp Glu Ala Leu Arg Leu Val Gln Lys His Gly Pro Arg
 20 25 30
 Asn Trp Ser Leu Ile Ser Lys Ser Ile Pro Gly Arg Ser Gly Lys Ser
 35 40 45
 Cys Arg Leu Arg Trp Cys Asn Gln Leu
 50 55

<210> 2287
 <211> 68
 <212> PRT
 <213> Eucalyptus grandis

<400> 2287
 Ser Pro Gln Val Glu His Arg Ala Phe Thr Pro Glu Glu Asp Asp Ile
 1 5 10 15
 Ile Val Arg Ala His Ala Arg Phe Gly Asn Lys Trp Ala Thr Ile Ala
 20 25 30
 Arg Leu Leu Ser Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn
 35 40 45
 Ser Thr Leu Lys Arg Lys Cys Ser Pro Pro Leu Ser Pro Leu Ala Glu
 50 55 60
 Glu Gly Asn Asn
 65

<210> 2288
 <211> 61
 <212> PRT
 <213> Eucalyptus grandis

<400> 2288
 Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu
 1 5 10 15
 Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg Tyr Ile Thr Gln Tyr
 20 25 30

Gly His Gly Cys Trp Ser Ser Val Pro Lys Leu Ala Gly Leu Gln Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50 55 60

<210> 2289

<211> 78

<212> PRT

<213> Eucalyptus grandis

<400> 2289

Gly Ser Ser Pro Ile Asp Gly Ser Asp Gly Tyr Leu Ser Asp Asp Pro
 1 5 10 15
 Ala Pro Gly Ser Arg Ser Ser Asn Arg Arg Val Glu Arg Lys Lys Gly
 20 25 30
 Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile Gly Leu Gln
 35 40 45
 Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp Phe Val Thr
 50 55 60
 Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr
 65 70 75

<210> 2290

<211> 53

<212> PRT

<213> Eucalyptus grandis

<400> 2290

Lys Lys Gly Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile
 1 5 10 15
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp
 20 25 30
 Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45
 Tyr Tyr Ile Arg Gln
 50

<210> 2291

<211> 59

<212> PRT

<213> Eucalyptus grandis

<400> 2291

Arg Lys Pro Cys Cys Asp Lys Arg Asp Thr Asn Lys Gly Ala Trp Ser
 1 5 10 15
 Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Lys His Gly Glu
 20 25 30
 Gly Ser Trp Arg Thr Leu Pro Gln Ala Ala Gly Leu Leu Arg Cys Gly
 35 40 45
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50 55

<210> 2292

<211> 65

<212> PRT

<213> Eucalyptus grandis

<400> 2292

Pro Asp Leu Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile
 1 5 10 15
 Ile Lys Leu His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly

```

      20              25              30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser
      35              40              45
His Leu Arg Arg Lys Leu Leu Lys Met Gly Ile Asp Pro Asn Asn His
      50              55              60
Arg
65

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<210> 2293
 <211> 54
 <212> PRT
 <213> Eucalyptus grandis

```

      <400> 2293
Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1              5              10              15
Trp Thr Lys Glu Glu Asp Gln Arg Leu Ile Asp Tyr Ile Leu His
      20              25              30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ser Ala Gly Leu Leu Arg
      35              40              45
Cys Gly Lys Ser Cys Arg
50

```

<210> 2294
 <211> 65
 <212> PRT
 <213> Eucalyptus grandis

```

      <400> 2294
Met Ala Arg Phe Pro Arg Val Asp Lys Ser Asn Ser Lys Lys Thr Val
 1              5              10              15
Lys Lys Gly Ala Trp Ser Ala Glu Glu Asp Gln Lys Leu Val Ala Tyr
      20              25              30
Ile Lys Arg Tyr Gly Ile Trp Asn Trp Thr His Met Ala Glu Pro Ala
      35              40              45
Gly Leu Ala Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr
      50              55              60
Leu
65

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<210> 2295
 <211> 40
 <212> PRT
 <213> Eucalyptus grandis

```

      <400> 2295
Arg Pro Asn Ile Lys His Gly Asn Ile Thr Gln Glu Glu Glu Glu Ile
 1              5              10              15
Ile Ile Asn Leu His Arg Val Leu Gly Asn Arg Trp Ala Ser Ile Ala
      20              25              30
Ser Arg Leu Ser Gly Arg Thr Asp
      35              40

```

<210> 2296
 <211> 41
 <212> PRT
 <213> Eucalyptus grandis

```

      <400> 2296
Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Met
 1              5              10              15

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Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn
 20 25 30
 Tyr Val Thr Thr Arg Thr Pro Thr Gln
 35 40

<210> 2297
 <211> 31
 <212> PRT
 <213> Eucalyptus grandis

<400> 2297
 Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Met
 1 5 10 15
 Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg
 20 25 30

<210> 2298
 <211> 44
 <212> PRT
 <213> Eucalyptus grandis

<400> 2298
 Glu Val Arg Lys Gly Pro Trp Thr Glu Gln Glu Asp Phe Gln Leu Val
 1 5 10 15
 Cys Phe Val Gly Leu Phe Gly Asp Arg Arg Trp Asp Phe Ile Ala Lys
 20 25 30
 Val Ser Gly Leu Lys Val Ala Gly Glu Asn Asn Arg
 35 40

<210> 2299
 <211> 61
 <212> PRT
 <213> Eucalyptus grandis

<400> 2299
 Met Gly Arg Ser Pro Cys Cys Glu Ser Glu His Met Asn Lys Gly Ala
 1 5 10 15
 Trp Ser Lys Glu Glu Asp Glu Arg Leu Ile Ala Tyr Ile Lys Arg His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50 55 60

<210> 2300
 <211> 67
 <212> PRT
 <213> Eucalyptus grandis

<400> 2300
 Pro Asp Leu Lys Arg Gly Asn Phe Ser Asp Glu Glu Asp Glu Leu Ile
 1 5 10 15
 Ile Thr Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Ala
 20 25 30
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
 35 40 45
 His Ile Lys Arg Lys Leu His Ala Arg Gly Ile Asp Pro Gln Thr His
 50 55 60
 Arg Pro Leu
 65

<210> 2301
 <211> 50
 <212> PRT
 <213> Eucalyptus grandis

<400> 2301
 Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu
 1 5 10 15
 Gly Leu Gln Lys Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn
 20 25 30
 Phe Val Lys Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45
 Tyr Phe
 50

<210> 2302
 <211> 53
 <212> PRT
 <213> Eucalyptus grandis

<400> 2302
 Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu
 1 5 10 15
 Gly Leu Gln Lys Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn
 20 25 30
 Phe Val Lys Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45
 Tyr Phe Leu Arg Arg
 50

<210> 2303
 <211> 64
 <212> PRT
 <213> Eucalyptus grandis

<400> 2303
 Met Ala Ser Ser Ser Val Ala Ser Ala Arg Lys Asp Ala Asp Arg
 1 5 10 15
 Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp Glu Ala Leu Gln Arg Leu
 20 25 30
 Val Gln Ser Tyr Gly Pro Arg Asn Trp Ser Leu Ile Ser Lys Ser Ile
 35 40 45
 Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu
 50 55 60

<210> 2304
 <211> 98
 <212> PRT
 <213> Eucalyptus grandis

<400> 2304
 Ser Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Glu Ala
 1 5 10 15
 Ile Val Arg Ala His Ala Arg Phe Gly Asn Lys Trp Ala Thr Ile Ala
 20 25 30
 Arg Leu Leu Asn Gly Arg Thr Asp Asn Ala Val Lys Asn His Trp Asn
 35 40 45
 Ser Thr Leu Lys Arg Lys Cys Ser Ser Thr Cys Ser Ala Gly Gly Asp
 50 55 60
 Asp Ala Asp Ala Leu Ala Glu Gln Gln Pro Leu Lys Arg Ser Ala Ser
 65 70 75 80

Leu Gly Thr Pro Thr Gly Gly Asn Asn Ala Val Ser Asp Leu Phe Phe
85 90 95
Ser Pro

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<210> 2305
<211> 50
<212> PRT
<213> Eucalyptus grandis
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[illegible]

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<210> 2306
<211> 60
<212> PRT
<213> Eucalyptus grandis
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<40> 2306

Pro	Asp	Leu	Lys	Arg	Gly	Ala	Phe	Ser	Pro	Gln	Glu	Glu	Leu	Ile
1				5					10				15	
Ile	His	Leu	His	Ser	Ile	Leu	Gly	Asn	Arg	Trp	Ser	Gln	Ile	Ala
			20					25					30	
Arg	Leu	Pro	Gly	Arg	Thr	Asp	Asn	Glu	Ile	Lys	Asn	Phe	Trp	Asn
			35				40						45	
Thr	Ile	Lys	Lys	Arg	Ser	Arg	Thr	Arg	His	His		Leu		
	50					55					60			

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<210> 2307
<211> 44
<212> PRT
<213> Eucalyptus grandis
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<400> 2307															
Lys	Leu	Asp	Phe	Ser	Glu	Asp	Glu	Glu	Thr	Leu	Val	Ile	Arg	Met	Tyr
1				5					10					15	
Asn	Leu	Val	Gly	Glu	Arg	Trp	Ser	Leu	Ile	Ala	Gly	Arg	Ile	Pro	Gly
			20					25					30		
Arg	Thr	Ala	Glu	Glu	Ile	Glu	Lys	Tyr	Trp	Asn	Ser				
		35					40								

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<210> 2308
<211> 61
<212> PRT
<213> Eucalyptus grandis
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Met Gly Arg															Glu Pro															Cys Cys Asp															Lys Leu Gly Val															Lys Lys Gly Pro																													
1															5																														10															15																													
Trp Thr Ala															Glu Glu															Asp Arg Lys															Leu Val Asn															Phe Ile															Leu Thr His														
20																														25																														30																													
Gly Gln Cys															Cys Trp Arg															Ala Val															Pro Lys Leu															Ala Gly															Leu Arg Arg														
35																														40																														45																													
Cys Gly Lys															Ser Cys Arg															Leu Arg															Trp Thr Asn															Tyr Leu																													

50 55 60

<210> 2309
<211> 64
<212> PRT
<213> Eucalyptus grandis

<400> 2309
Pro Asp Leu Lys Arg Gly Leu Leu Asn Glu Ala Glu Glu Ser Leu Val
1 5 10 15
Ile Asp Leu His Ala Thr Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala
20 25 30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr
35 40 45
His Ile Lys Lys Lys Leu Ile Arg Met Gly Ile Asp Pro Val Thr His
50 55 60

<210> 2310
<211> 61
<212> PRT
<213> Eucalyptus grandis

<400> 2310
Met Gly Arg Gln Pro Cys Cys Asp Lys Ser Gly Val Lys Lys Gly Pro
1 5 10 15
Trp Thr Ala Glu Glu Asp Lys Lys Leu Ile Asn Phe Ile Leu Thr Asn
20 25 30
Gly His Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg
35 40 45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu
50 55 60

<210> 2311
<211> 67
<212> PRT
<213> Eucalyptus grandis

<400> 2311
Pro Asp Leu Lys Arg Gly Leu Leu Ser Glu Ala Glu Glu Gln Leu Val
1 5 10 15
Ile Asp Leu His Ala Arg Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala
20 25 30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr
35 40 45
His Ile Lys Lys Lys Leu Leu Lys Met Gly Ile Asp Pro Val Thr His
50 55 60
Glu Pro Leu
65

<210> 2312
<211> 50
<212> PRT
<213> Pinus radiata

<400> 2312
Lys Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr
1 5 10 15
Gly Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn
20 25 30
Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
35 40 45

Tyr Phe
50

<210> 2313
<211> 53
<212> PRT
<213> Pinus radiata

<400> 2313
Lys Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr
1 5 10 15
Gly Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn
20 25 30
Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
35 40 45
Tyr Phe Leu Arg Gln
50

<210> 2314
<211> 60
<212> PRT
<213> Pinus radiata

<400> 2314
Gly Lys Ser Pro Gly His Asp Glu Pro Asp Arg Ile Lys Gly Pro Trp
1 5 10 15
Ser Pro Glu Glu Asp Ala Ala Leu Gln His Phe Val Gln Lys Tyr Gly
20 25 30
Pro Arg Asn Trp Ser Leu Ile Ser Lys Ala Ile Pro Gly Arg Ser Gly
35 40 45
Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser
50 55 60

<210> 2315
<211> 60
<212> PRT
<213> Pinus radiata

<400> 2315
Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Ala Thr Ile
1 5 10 15
Val Arg Ala His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg
20 25 30
Met Leu Ser Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser
35 40 45
Thr Leu Arg Arg Arg Cys Gln Gly Gly Gly Ala Leu
50 55 60

<210> 2316
<211> 20
<212> PRT
<213> Pinus radiata

<400> 2316
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Val
1 5 10 15
Gly Leu Gln Arg
20

<210> 2317
<211> 18

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<212> PRT
<213> Pinus radiata

<400> 2137
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Val
1          5          10          15
Gly Leu

<210> 2318
<211> 10
<212> PRT
<213> Pinus radiata

<400> 2318
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu
1          5          10

<210> 2319
<211> 14
<212> PRT
<213> Pinus radiata

<400> 2319
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe
1          5          10

<210> 2320
<211> 68
<212> PRT
<213> Pinus radiata

<400> 2320
Met Arg Cys Thr Arg Trp Gln Gly Leu Pro Phe Ser Ser Lys Pro Lys
1          5          10          15
Val Lys Lys Gly Leu Trp Ser Pro Glu Glu Asp Glu Lys Leu Ile Asn
20          25          30
Tyr Met Met Lys Asn Gly Leu Leu Gly Cys Ser Trp Ser Tyr Val Ala
35          40          45
Lys Gln Ile Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp
50          55          60
Thr Asn Tyr Leu
65

<210> 2321
<211> 62
<212> PRT
<213> Pinus radiata

<400> 2321
Met Gly Arg Ala Pro Cys Cys Asp Lys Ala Asn Val Lys Lys Gly Pro
1          5          10          15
Trp Ser Pro Glu Glu Asp Thr Lys Leu Lys Ala Phe Ile Glu Gln His
20          25          30
Gly Thr Gly Gly Asn Trp Ile Ala Leu Pro Gln Lys Ala Gly Leu Lys
35          40          45
Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
50          55          60

<210> 2322
<211> 60

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<212> PRT

<213> Pinus radiata

<400> 2322

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Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1          5          10
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
 20          25          30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
 35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr
 50          55          60

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<210> 2323

<211> 46

<212> PRT

<213> Pinus radiata

<400> 2323

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Arg Pro Asp Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu
 1          5          10
Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala
 20          25          30
Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
 35          40          45

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<210> 2324

<211> 61

<212> PRT

<213> Pinus radiata

<400> 2324

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Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro
 1          5          10
Trp Thr Pro Glu Glu Asp Gln Lys Leu Ala Tyr Ile Gln Glu His
 20          25          30
Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Leu Leu Arg
 35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu
 50          55          60

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<210> 2325

<211> 61

<212> PRT

<213> Pinus radiata

<400> 2325

```

Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1          5          10
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
 20          25          30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
 35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50          55          60

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<210> 2326

<211> 45

<212> PRT

<213> Pinus radiata

<400> 2326
 Pro Asp Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val
 1 5 10 15
 Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly
 20 25 30
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
 35 40 45

<210> 2327
 <211> 50
 <212> PRT
 <213> Pinus radiata

<400> 2327
 Lys Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu
 1 5 10 15
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn
 20 25 30
 Phe Val Ile Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45
 Tyr Phe
 50

<210> 2328
 <211> 53
 <212> PRT
 <213> Pinus radiata

<400> 2328
 Lys Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu
 1 5 10 15
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn
 20 25 30
 Phe Val Ile Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45
 Tyr Phe Ile Arg Gln
 50

<210> 2329
 <211> 48
 <212> PRT
 <213> Pinus radiata

<400> 2329
 Gln Arg Glu Arg Trp Ser Glu Asp Glu His Leu Lys Phe Leu Glu Ala
 1 5 10 15
 Leu Lys Met Tyr Gly Arg Ala Trp Arg Arg Ile Glu Glu His Ile Gly
 20 25 30
 Thr Lys Thr Ala Val Gln Ile Arg Ser His Ala Gln Lys Phe Phe Ser
 35 40 45

<210> 2330
 <211> 42
 <212> PRT
 <213> Pinus radiata

<400> 2330
 Gln Arg Glu Arg Trp Ser Glu Asp Glu His Leu Lys Phe Leu Glu Ala
 1 5 10 15
 Leu Lys Met Tyr Gly Arg Ala Trp Arg Arg Ile Glu Glu His Ile Gly
 20 25 30

Thr Lys Thr Ala Val Gln Ile Arg Ser His
35 40

<210> 2331
<211> 61
<212> PRT
<213> Pinus radiata

<400> 2331
Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
1 5 10 15
Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
20 25 30
Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
35 40 45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu
50 55 60

<210> 2332
<211> 67
<212> PRT
<213> Pinus radiata

<400> 2332
Pro Asp Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile
1 5 10 15
Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly
20 25 30
Arg Met Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr
35 40 45
His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His
50 55 60
Lys Pro Leu
65

<210> 2333
<211> 55
<212> PRT
<213> Pinus radiata

<400> 2333
Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp
1 5 10 15
Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr Gly Pro Arg Asn Trp Thr
20 25 30
Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu
35 40 45
Arg Trp Cys Asn Gln Leu Ser
50 55

<210> 2334
<211> 56
<212> PRT
<213> Pinus radiata

<400> 2334
Lys Gly Pro Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val
1 5 10 15
Gln Lys Tyr Gly Pro Arg Asn Trp Trp Leu Ile Ser Lys Gly Ile Pro
20 25 30
Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser

35 40 45
 Pro Gln Val Glu His Arg Pro Phe
 50 55
 <210> 2335
 <211> 34
 <212> PRT
 <213> Pinus radiata
 <400> 2335
 Met Gly Ala Pro Lys Gln Lys Trp Thr Ser Glu Glu Gly Ala Leu
 1 5 10 15
 Arg Ala Gly Val Glu Lys Tyr Gly Ala Gly Lys Trp Gln Thr Ile Leu
 20 25 30
 Lys Asp

<210> 2336
 <211> 51
 <212> PRT
 <213> Pinus radiata
 <400> 2336
 Leu Arg Lys Gly Leu Trp Ser Pro Asp Glu Asp Ile Glu Leu Thr Thr
 1 5 10 15
 Tyr Ile Met Arg Lys Gly Leu Met Gly Cys Trp Asn Tyr Ile Ala Lys
 20 25 30
 Gln Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile
 35 40 45
 Asn Tyr Leu
 50

<210> 2337
 <211> 45
 <212> PRT
 <213> Pinus radiata
 <400> 2337
 Pro Gly Leu Lys Arg Cys Ala Ile Ser Pro Gln Glu Glu Arg Leu Ile
 1 5 10 15
 Ile Gln Leu Gln Ser Ser Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala
 20 25 30
 His Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr
 35 40 45

<210> 2338
 <211> 62
 <212> PRT
 <213> Pinus radiata
 <400> 2338
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Gln Gln Glu Asp Thr Arg Leu Val Ala His Ile Arg Ala His
 20 25 30
 Gly Gln Gly Gly Trp Ser Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Gln Arg Trp Ile Asn Tyr Leu His
 50 55 60

<210> 2339

<211> 39
 <212> PRT
 <213> *Pinus radiata*

<400> 2339
 Pro Asp Leu Lys Arg Ser Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile
 1 5 10 15
 Val Arg Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly
 20 25 30
 Arg Leu Pro Gly Arg Thr Asp
 35

<210> 2340
 <211> 61
 <212> PRT
 <213> *Pinus radiata*

<400> 2340
 Gly Thr His Pro Ala Pro Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp
 1 5 10 15
 Ser Pro Val Glu Asp Asn Gln Leu Thr Asn Tyr Ile Leu Arg Arg Gly
 20 25 30
 Leu Val Gly Cys Trp Asn Tyr Val Ala Lys Gln Ala Gly Leu Gln Arg
 35 40 45
 Thr Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50 55 60

<210> 2341
 <211> 43
 <212> PRT
 <213> *Pinus radiata*

<400> 2341
 Pro Gly Leu Lys Arg His Pro Ile Ser Arg Gln Glu Glu Gln Leu Ile
 1 5 10 15
 Ile Glu Leu Gln Ser Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala
 20 25 30
 Gln Leu Pro Gly Arg Thr Asp Ile Glu Ile Lys
 35 40

<210> 2342
 <211> 61
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2342
 Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu
 1 5 10 15
 Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg His Ile Ser Gln Tyr
 20 25 30
 Gly His Gly Cys Trp Ser Ser Val Pro Lys Gln Ala Gly Leu Gln Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50 55 60

<210> 2343
 <211> 67
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2343


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Pro Asp Leu Lys Arg Gly Ala Phe Ser Gln Asp Glu Glu Asp Leu Ile
1      5      10      15
Ile Glu Leu His Ala Ala Leu Gly Asn Lys Trp Ser Gln Ile Ala Ala
20      25      30
Asn Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Leu Trp Asn Ser
35      40      45
Cys Leu Lys Lys Lys Leu Arg Gln Arg Gly Ile Asp Pro Val Ser His
50      55      60
Arg Pro Leu
65

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<210> 2344
<211> 58
<212> PRT
<213> Eucalyptus grandis

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<400> 2344
Thr Pro Cys Cys Ser Lys Val Gly Ile Lys Arg Gly Pro Trp Thr Pro
1      5      10      15
Glu Glu Asp Glu Val Leu Ala Ser Tyr Val Arg Arg Glu Gly Glu Gly
20      25      30
Arg Trp Arg Thr Leu Pro Lys Arg Ala Gly Leu Gln Arg Cys Gly Lys
35      40      45
Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu
50      55

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<210> 2345
<211> 67
<212> PRT
<213> Eucalyptus grandis

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<400> 2345
Pro Ser Val Lys Arg Gly Gln Ile Ala Pro Asp Glu Glu Asp Leu Ile
1      5      10      15
Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly
20      25      30
Arg Ile Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
35      40      45
His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His
50      55      60
Lys Pro Leu
65

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<210> 2346
<211> 67
<212> PRT
<213> Eucalyptus grandis

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<400> 2346
Met Asp Lys Lys Pro Asp Asp Asp Ser Gly Lys Ser Gln Asp Val Glu
1      5      10      15
Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn
20      25      30
Tyr Ile Ala Asn His Gly Glu Gly Ser Trp Asn Ser Leu Ala Lys Ala
35      40      45
Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn
50      55      60
Tyr Leu Arg
65

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<210> 2347

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<211> 56
 <212> PRT
 <213> Eucalyptus grandis

<400> 2347
 Pro Asp Val Arg Arg Gly Asn Ile Thr Thr Glu Glu Gln Leu Leu Ile
 1 5 10 15
 Met Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala Lys
 20 25 30
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe Trp Arg Thr
 35 40 45
 Arg Ile Gln Lys His Ile Lys Gln
 50 55

<210> 2348
 <211> 63
 <212> PRT
 <213> Eucalyptus grandis

<400> 2348
 Met Asp Lys Lys Pro Cys Tyr Arg Thr Gln Asp Pro Gln Val Arg Lys
 1 5 10 15
 Gly Pro Trp Thr Leu Glu Glu Asp Leu Ile Leu Met Asp Tyr Ile Ala
 20 25 30
 Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ala Gly Leu
 35 40 45
 Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
 50 55 60

<210> 2349
 <211> 54
 <212> PRT
 <213> Eucalyptus grandis

<400> 2349
 Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu Ile
 1 5 10 15
 Ile His Leu Gln Ser Met Trp Gly Asn Arg Trp Ser Glu Ile Ala Lys
 20 25 30
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg Thr
 35 40 45
 Lys Ile Gln Lys His Ile
 50

<210> 2350
 <211> 47
 <212> PRT
 <213> Eucalyptus grandis

<400> 2350
 Ser Arg Glu Ser Trp Thr Glu Gln Glu His Asp Lys Phe Leu Glu Ala
 1 5 10 15
 Leu His Leu Phe Asp Arg Asp Trp Lys Ile Glu Ala Phe Val Gly
 20 25 30
 Ser Lys Thr Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe
 35 40 45

<210> 2351
 <211> 59
 <212> PRT
 <213> Eucalyptus grandis

<400> 2351
 Ser Trp Thr Glu Gln Glu His Asp Lys Phe Leu Glu Ala Leu His Leu
 1 5 10 15
 Phe Asp Arg Asp Trp Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr
 20 25 30
 Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln
 35 40 45
 Lys Asn Gly Thr Ser Glu His Val Pro Pro Pro
 50 55

<210> 2352
 <211> 45
 <212> PRT
 <213> Pinus radiata

<400> 2352
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
 20 25 30
 Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly
 35 40 45

<210> 2353
 <211> 45
 <212> PRT
 <213> Pinus radiata

<400> 2353
 Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His
 20 25 30
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly
 35 40 45

<210> 2354
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 2354
 Met Gly Arg Ser Pro Cys Cys Ala Lys Glu Gly Leu Asn Arg Gly Ala
 1 5 10 15
 Trp Thr Lys Thr Glu Asp Ile Ile Leu Ser Glu Tyr Ile Arg Ile His
 20 25 30
 Gly Asp Gly Gly Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Lys Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
 50 55 60

<210> 2355
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 2355
 Met Gly Arg Ala Pro Cys Cys Ser Asn Asp Asp Arg Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His

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                20                25                30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
      35
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50                55                60

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<210> 2356
 <211> 68
 <212> PRT
 <213> Pinus radiata

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<400> 2356
Pro Asp Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile
  1                5                10                15
Leu Lys Leu His Ala Leu Leu Gly Asn Asn Arg Trp Ser Leu Ile Ala
      20                25                30
Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn
      35                40                45
Ser His Leu Lys Arg Lys Leu Ile Ser Met Gly Ile Asp Pro Leu Thr
      50                55                60
His Arg Pro Phe
65

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<210> 2357
 <211> 61
 <212> PRT
 <213> Pinus radiata

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<400> 2357
Met Gly Arg Ala Pro Cys Cys Ser Asn Gly Asp Arg Asn Lys Gly Ala
  1                5                10                15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His
      20                25                30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Asn Ala Ala Gly Leu Leu Arg
      35                40                45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50                55                60

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<210> 2358
 <211> 39
 <212> PRT
 <213> Pinus radiata

```

<400> 2358
Pro Asp Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile
  1                5                10                15
Leu Lys Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly
      20                25                30
Arg Leu Pro Gly Arg Thr Asp
      35

```

<210> 2359
 <211> 62
 <212> PRT
 <213> Pinus radiata

```

<400> 2359
Met Gly Arg Thr Pro Cys Cys Glu Lys Asn Ile Gly Leu Lys Lys Gly
  1                5                10                15
Pro Trp Thr Pro Glu Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Ser
      20                25                30

```

His Gly His Gly Ser Trp Arg Ala Leu Pro Lys Arg Ala Gly Leu Leu
 35 40 45
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu
 50 55 60

<210> 2360
 <211> 66
 <212> PRT
 <213> Pinus radiata

<400> 2360
 Pro Asp Ile Lys Arg Gly Gln Phe Ser Phe Glu Glu Glu Gln Thr Ile
 1 5 10 15
 Ile Glu Leu His Ala Val Leu Gly Asn Lys Trp Ser Thr Ile Ala Gly
 20 25 30
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
 35 40 45
 His Leu Lys Lys Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His
 50 55 60
 Arg Pro
 65

<210> 2361
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 2361
 Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
 20 25 30
 Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu
 50 55 60

<210> 2362
 <211> 67
 <212> PRT
 <213> Pinus radiata

<400> 2362
 Pro Asp Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile
 1 5 10 15
 Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly
 20 25 30
 Arg Met Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr
 35 40 45
 His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His
 50 55 60
 Lys Pro Leu
 65

<210> 2363
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 2363
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala

```

      1           5           10           15
Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
      20
Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
      35
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50           55           60

```

<210> 2364
 <211> 67
 <212> PRT
 <213> Pinus radiata

```

      <400> 2364
Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile
      1           5           10           15
Ile Lys Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly
      20
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
      35
His Ile Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His
      50           55           60
Arg Pro Leu
      65

```

<210> 2365
 <211> 61
 <212> PRT
 <213> Pinus radiata

```

      <400> 2365
Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
      1           5           10           15
Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
      20
Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
      35
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50           55           60

```

<210> 2366
 <211> 67
 <212> PRT
 <213> Pinus radiata

```

      <400> 2366
Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile
      1           5           10           15
Ile Lys Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly
      20
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
      35
His Ile Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His
      50           55           60
Arg Pro Leu
      65

```

<210> 2367
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 2367

```

Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1          5          10          15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
          20          25          30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
          35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50          55          60

```

<210> 2368

<211> 67

<212> PRT

<213> Pinus radiata

<400> 2368

```

Pro Asp Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val
 1          5          10          15
Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly
          20          25          30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
          35          40          45
His Ile Lys Arg Lys Leu Leu Asn Arg Gly Leu Asp Pro Gln Ser His
 50          55          60
Arg Pro Leu
65

```

```

      85          90          95
Ala Tyr Asp Phe Ala Ala Tyr Cys Leu Arg Gly Ser Lys Ala Arg Phe
      100          105          110
Asn Phe Pro Asp Ser Pro Pro Glu Ile Pro Cys Ala Ser Ser Leu Ser
      115          120          125
Pro Ser Gln Ile Gln Ala Gly Ala Ala Arg Phe Ala Ala Glu Glu Phe
      130          135          140
Gln Met Pro Ser Asp Asp Thr Ala Ser Ser Ser Cys Gly Ser Glu
      145          150          155
Ala Glu Ser Asp Leu Pro Pro Glu Ile Pro Cys Ala Ser Ser Val Ser
      160          165          170
Pro Pro Pro Ile Gln Ala Ala Ala Pro Arg Phe Ala Ala Glu Glu Phe
      175          180          185
Arg Leu Pro Ser Asp Glu Asp Thr Ala Ser Ser Ser Cys Gly Ser Val
      190          195          200
Thr Glu Ser Asn Ile Asp Ser Gln Gln Ile Ser Ala Glu Gln Gly Ser
      205          210          215
Ala Phe Trp Asp Ser Leu Phe Leu
      220          225          230

```

<210> 1026
 <211> 88
 <212> PRT
 <213> Pinus radiata

```

      <400> 1026
His Gln Trp His Arg Phe Cys Ser Arg Arg Leu Cys Cys Thr Ala Leu
      1          5          10          15
His Asn Thr Gln Lys Gln Cys Thr Lys Ser Ala Ala Thr Gly Lys Gly
      20          25          30
Gly Ile Lys Arg Ile Arg Arg Gln Gln Glu Ala Ala Pro Ser Pro Pro
      35          40          45
Glu Glu Ala Thr Leu Asn Gln Gln Thr Pro Pro Tyr Arg Gly Val Arg
      50          55          60
Arg Arg Asn Trp Gly Lys Trp Val Ser Glu Ile Arg Glu Pro Lys Lys
      65          70          75          80
Lys Thr Arg Ile Trp Leu Gly Ser
      85

```

<210> 1027
 <211> 501
 <212> PRT
 <213> Pinus radiata

```

      <400> 1027
Met Cys Gly Gly Ala Ile Ile Ser Asp Phe Ile Ile Pro Pro Ala Ser
      1          5          10          15
Arg Gly Arg Arg Val Thr Ala Arg Asp Ile Trp Pro Asp Phe Asp Lys
      20          25          30
Phe Ser Glu Phe Ile Asn Gly Gly Ala Ala Val Glu Ser Phe Asp Val
      35          40          45
Ser Val Asp Val Asp Asp Asp Glu Glu Asp Ser Asp Asp Asp Glu Phe
      50          55          60
Leu Asp Phe Glu Glu Ser Tyr Gln Asn Lys Lys Lys Lys Gln Gln Gln
      65          70          75          80
Pro Ile Ser Pro Thr Lys Gly Phe Glu Leu Pro Leu Ala Arg Gly Leu
      85          90          95
Asp Gly Pro Ala Ala Lys Ser Ala Val Arg Lys Arg Lys Asn Leu Tyr
      100          105          110
Arg Gly Ile Arg Gln Arg Pro Trp Gly Lys Trp Ala Ala Glu Ile Arg
      115          120          125

```


Asp Pro Arg Lys Gly Ala Arg Val Trp Leu Gly Thr Phe Asn Thr Ala
 130 135 140
 Glu Glu Ala Ala Arg Ala Tyr Asp Ala Ala Ala Arg Lys Ile Arg Gly
 145 150 155 160
 Lys Lys Ala Lys Val Asn Phe Val Asp Glu Pro Pro Ser Val Lys
 165 170 175
 Lys Glu Ser Asn Asn Ala Lys Gly Ser Lys Gly Ser Ser Lys Lys
 180 185 190
 Ile Lys Ser Tyr Thr Thr Pro Lys Ala Asp Phe Phe Glu Gly Phe Lys
 195 200 205
 Thr Ala Asn Pro Ser Ile Ala Gln Tyr Asn Phe His Gln Lys Phe Pro
 210 215 220
 Asn Pro Ser Cys Asp Asp Leu Gly Tyr Gln Asn Pro Leu Ser Pro Leu
 225 230 235 240
 His Ala Ile Cys Asn Arg Asn Phe Ala Ala Lys Gln Ser Ser Ser Ala
 245 250 255
 Leu Pro Ala Tyr Ser Thr Glu Phe Ser Asp Phe Asp Asp Ser Glu Val
 260 265 270
 Asp Asn Leu Val Pro Gln Pro Ala Ser Phe Glu Pro Met Lys Asn Ile
 275 280 285
 Asn Lys Arg Lys Gly Tyr Asn Ser Phe Glu Ser Asp Thr Ser Ser Val
 290 295 300
 Ser Ala Asp Arg Ser His Ile Ser Trp Val Thr Glu Val Lys Thr Pro
 305 310 315 320
 Glu Ile Ser Ser Val Pro Lys Ala Glu Ala Asp Ser Asp His Tyr Asp
 325 330 335
 Phe Ala Asp Met Ser Thr Pro Val Ala Thr Ser Val Ser Ala Gly Ser
 340 345 350
 Pro Glu Val Gln Leu Pro Pro Phe Asn Asn Gly Leu Asn Lys Ser Pro
 355 360 365
 Ser Val Glu Asp Gly Val Ala Ala Glu Lys Ser Pro Lys Leu Glu Glu
 370 375 380
 Ser Ser Gln Leu Glu Ile Ser Glu Asp Leu Pro Ser Leu Glu Ser Tyr
 385 390 395 400
 Pro Trp Leu Phe Gln Met Pro Tyr Phe Glu Gly Leu Asp Gln Ser Leu
 405 410 415
 Gln Gly Val Gly Ile Gly Asp Ala Ser Phe Pro Asp Gly Glu Asn Asp
 420 425 430
 Leu Gln Leu Trp Ser Phe Asp Ala Val Pro Ile Ser Asp Ser Ala Tyr
 435 440 445
 Ile Ser Leu Glu Ser Leu Ala Cys Lys Gln Leu Val Ile Met Glu Ser
 450 455 460
 Arg Arg Leu Val Met Ala Ser Phe Cys Arg Pro Ser Ser Asn Arg Glu
 465 470 475 480
 Leu Val Ile Phe Pro Leu Phe Phe Phe Ile Gln Phe Asp Gly Ala Thr
 485 490 495
 Val Ile Ser Ala His
 500

<210> 1028

<211> 134

<212> PRT

<213> Pinus radiata

<400> 1028

Met Ala Phe Ala Gly Thr Gln Gln Lys Cys Lys Ala Cys Glu Lys Thr
 1 5 10 15
 Val Tyr Val Val Asp Gln Leu Thr Ala Asp Gly Ser Val Phe His Lys
 20 25 30
 Ala Cys Phe Arg Cys His His Cys Asn Gly Thr Leu Lys Leu Ser Asn
 35 40 45

Tyr Ser Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe Asp Gln
 50 55 60
 Leu Phe Lys Arg Thr Gly Ser Leu Asp Lys Ser Phe Glu Gly Thr Pro
 65 70 75 80
 Lys Ala Val Lys Asn Glu Lys Leu Asn Asp Gly Glu Ile Lys Thr Pro
 85 90 95
 Asn Arg Val Ser Ala Leu Phe Ser Gly Thr Gln Glu Lys Cys Leu Ala
 100 105 110
 Cys Gly Asn Thr Val Tyr Pro Ile Glu Lys Val Ser Val Glu Gly Val
 115 120 125
 Gly Tyr His Lys Ala Cys
 130

<210> 1029

<211> 76

<212> PRT

<213> Pinus radiata

<400> 1029

Met Asp Gly Ser Gln Asn Ser Gly Gly Asn Ala Val Pro Pro Phe Leu
 1 5 10 15
 Thr Lys Thr Tyr Asp Met Val Asp Asp Ser Ser Thr Asp Ser Ile Val
 20 25 30
 Ser Trp Ser Pro Gly Asn Asn Ser Phe Ile Val Trp Asn Pro Pro Glu
 35 40 45
 Phe Ala Arg Asp Leu Leu Pro Lys Tyr Phe Lys His Asn Asn Phe Ser
 50 55 60
 Ser Phe Val Arg Gln Leu Asn Thr Tyr Gly Phe Arg
 65 70 75

<210> 1030

<211> 97

<212> PRT

<213> Pinus radiata

<400> 1030

His Glu Lys Lys Ala Val Leu Trp Asn Met Asp Thr Leu Lys Ala Lys
 1 5 10 15
 Gly Ser Leu Glu Glu His Ser Phe Leu Ile Thr Asp Val Arg Phe Ser
 20 25 30
 Pro Asn Ser Thr Arg Leu Ala Thr Ser Ser Phe Asp Arg Thr Val Lys
 35 40 45
 Val Trp Asp Ala Asp Asn Pro Asn Tyr Thr Leu Arg Thr Phe Ser Gly
 50 55 60
 His Thr Gly Ser Val Met Ser Leu Asp Phe His Pro Asn Asn Glu Asp
 65 70 75 80
 Leu Ile Cys Ser Cys Asp Gly Glu Ser Glu Val Arg Tyr Trp Ser Val
 85 90 95

Asn

<210> 1031

<211> 117

<212> PRT

<213> Pinus radiata

<400> 1031

Met Gly Tyr Leu Gln Glu Leu Glu Asp Gln Ile Ile Gly Leu Gln Asn
 1 5 10 15
 Leu Val Lys Arg Asn Glu Arg Leu Tyr Gly Ser Gly Asn Thr Pro Ser
 20 25 30

Gly Gly Val Ala Leu Pro Phe Ile Leu Val Gln Thr Arg Pro Gln Ala
 35 40 45
 Thr Val Glu Ile Glu Ile Ser Glu Asp Met Gln Leu Val His Phe Asp
 50 55 60
 Phe Asn Ser Thr Pro Phe Glu Leu His Asp Asp Ala Tyr Val Leu Lys
 65 70 75 80
 Ala Met Gly Phe Cys Glu Lys Pro Phe Thr Asp Gly Met Asp Val Thr
 85 90 95
 Gly His Asp Ser Phe Ala Asn Gly Thr Gly Phe Gly Glu Asn Asn Met
 100 105 110
 Thr Ile Thr Asn Met
 115

<210> 1032

<211> 146

<212> PRT

<213> Pinus radiata

<400> 1032
 Thr Arg Val Leu Leu Ile Asp Asp His Pro Leu Phe Arg Glu Gly Leu
 1 5 10 15
 Ala Gly Ala Ile Gln Ala Glu Pro Asp Phe Glu Val Val Gly Gln Ala
 20 25 30
 Gly Thr Val Asp Glu Leu Arg Gly Leu Ala Pro Gln Ile Glu Pro Asp
 35 40 45
 Val Ala Ile Val Asp Leu Leu Met Pro Ser Val Ser Gly Ile Gly Val
 50 55 60
 Thr Arg Glu Leu Cys Glu Leu Leu Pro Arg Cys Arg Val Leu Gly Leu
 65 70 75 80
 Ser Ala Val Val Asp Ala Ala Ala Ile Ala Glu Met Leu Arg Ala Gly
 85 90 95
 Ala Ser Gly Phe Ala Leu Lys Thr Gln Pro Ala Pro Asp Ile Leu Asp
 100 105 110
 Ala Val Arg Arg Thr Val Ala Gly Glu Ser Tyr Leu Pro Pro Ser Val
 115 120 125
 Ser Arg Glu Ala Ile Asp Ala Glu Leu Ala Gly Gly Ala Pro Pro Ser
 130 135 140
 Leu Ala
 145

<210> 1033

<211> 181

<212> PRT

<213> Pinus radiata

<400> 1033
 Met Ser Ile Leu Pro Lys Ser Asp Ser Ile His Ile Arg Glu Val Trp
 1 5 10 15
 Ala Asp Asn Leu Glu Glu Glu Phe Asn Leu Ile Arg Glu Ile Val Asp
 20 25 30
 Asp Tyr Pro Leu Ile Ala Met Asp Thr Glu Phe Pro Gly Ile Val Val
 35 40 45
 Arg Pro Val Gly Lys Phe Arg Thr Val Gln Glu Tyr Asn Tyr Glu Thr
 50 55 60
 Leu Arg Ser Asn Val Asp Val Leu Lys Leu Ile Gln Leu Gly Leu Thr
 65 70 75 80
 Phe Ser Asp Glu Asp Gly Asn Leu Pro Asn Cys Gly Thr Asp Arg Tyr
 85 90 95
 Cys Val Trp Gln Phe Asn Phe Arg Glu Phe Asn Ile Trp Glu Asp Ala
 100 105 110
 Tyr Ala Ser Asp Ser Ile Glu Leu Leu Arg Gln Ser Gly Ile Asp Phe

```

115                      120                      125
Lys Lys Asn Ser Glu Arg Gly Val Asp Ser His Leu Phe Ala Glu Leu
130                      135                      140
Leu Met Ser Ser Gly Ile Val Leu Asn Glu Asn Val Arg Trp Ile Thr
145                      150                      155                      160
Phe His Ser Gly Tyr Asp Phe Gly Tyr Leu Leu Lys Leu Val Met Asn
165                      170                      175
Arg Ser Leu Pro Pro
180

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<210> 1034
<211> 122
<212> PRT
<213> Pinus radiata

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<400> 1034
Glu His Ala Cys Pro Met Ala Cys His Pro Gly Pro Cys Pro Pro Cys
1                      5                      10                      15
Leu Val Ser Val Ser Lys Ser Cys Trp Cys Gly Ser Lys Thr Leu Val
20                      25                      30
Ser Arg Cys Ser Val Leu Asn Lys Gly Thr Ser Thr Asn Ala Gly Val
35                      40                      45
Gly Pro Val Leu Ser Cys Gly Gln Pro Cys Gly Arg Leu Leu Gly Cys
50                      55                      60
Glu Lys His Thr Cys Glu Gln Glu Cys His Pro Gly Pro Cys Pro Pro
65                      70                      75                      80
Cys Asp Ile Val Asp Val Ala Lys Cys Tyr Cys Gly Arg Gln Glu Arg
85                      90                      95
Gly Met Ala Cys Gly Thr Gly Ile Val Glu Thr Cys Val Val Glu Gly
100                      105                      110
Glu Gly Ser Trp Glu Gly Arg Trp Gln Cys
115                      120

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<210> 1035
<211> 158
<212> PRT
<213> Pinus radiata

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<400> 1035
Met Arg Ile Asn Glu Ala Thr Pro Lys Lys Ser Leu Gly Phe Gln Gln
1                      5                      10                      15
Pro Tyr Ser Met Lys Gly Asn Tyr Tyr Thr Gln Ala Tyr Gly Gly Ala
20                      25                      30
Val Ala Ser Gln Ala Phe Gln Ser Asp Asn Asp Pro Asn Asn Thr Thr
35                      40                      45
Ile Phe Val Gly Gly Leu Asp Pro Asn Ala Thr Asp Glu Asp Leu Arg
50                      55                      60
Gln Val Phe Gly Pro Tyr Gly Glu Ile Val Tyr Val Lys Ile Pro Val
65                      70                      75                      80
Gly Lys Gly Cys Gly Phe Val Gln Phe Thr Asn Arg Ser Ser Ala Glu
85                      90                      95
Glu Ala Leu Gln Lys Leu His Gly Thr Val Ile Gly Gln Gln Ser Ile
100                      105                      110
Arg Leu Ser Trp Gly Arg Ser Pro Ala Asn Lys Gln Thr Ala Ser Trp
115                      120                      125
Gly Val Gln Pro Gln Ala Asp Pro Asn Gln Trp Asn Gly Gly Gly Ala
130                      135                      140
Tyr Tyr Gly Tyr Gly Gln Gly Tyr Glu Ala Tyr Gly Tyr Ala
145                      150                      155

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<210> 1036

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<211> 126
 <212> PRT
 <213> Pinus radiata

<400> 1036
 Gln Tyr Leu Ser Pro Gly Lys Ser Ala Pro Phe Trp Leu Cys Gln Asp
 1 5 10 15
 Met Ala Ile Thr Ser Gln Gln His His Met Asn Ala Leu Pro Tyr Asn
 20 25 30
 Glu Arg Ser Glu Lys Arg Pro Lys Phe Lys Gly Ile Arg Met Arg Lys
 35 40 45
 Trp Gly Ser Trp Gly Ser Glu Ile Arg Met Pro Lys Thr Arg Thr Lys
 50 55 60
 Ile Trp Leu Gly Ser Tyr Glu Thr Ala Glu Gln Ala Ala Arg Ala Tyr
 65 70 75 80
 Asp Ala Ala Leu Tyr Cys Leu Arg Gly Pro Asn Ala Lys Phe Asn Phe
 85 90 95
 Pro Asp Thr Val Pro Ser Ile Pro Ser Ala Phe Ser Leu Ser Arg His
 100 105 110
 Gln Ile Gln Leu Ala Ala Ala Arg Tyr Ala Arg Asp Glu Leu
 115 120 125

<210> 1037
 <211> 79
 <212> PRT
 <213> Pinus radiata

<400> 1037
 Met Glu Pro Met Asp Ile Val Gly Lys Ser Lys Asp Asp Val Ser Leu
 1 5 10 15
 Pro Lys Ala Thr Met Phe Lys Ile Ile Lys Glu Met Leu Pro Pro Asp
 20 25 30
 Val Arg Val Ala Arg Asp Ala Gln Asp Leu Leu Val Glu Cys Cys Val
 35 40 45
 Glu Phe Ile Asn Leu Ile Ser Ser Glu Ser Asn Glu Val Cys Gly Arg
 50 55 60
 Glu Glu Lys Arg Thr Ile Ala Pro Glu His Val Leu Arg Ala Leu
 65 70 75

<210> 1038
 <211> 132
 <212> PRT
 <213> Pinus radiata

<400> 1038
 Glu Ile Ser Leu Phe Trp Leu Gln Ser Phe Cys Lys Leu Pro Asn Met
 1 5 10 15
 Glu Asn Val Pro Glu Gln Glu Pro Asp Asn Thr Ile Ser Leu Pro His
 20 25 30
 Glu Asp Arg Gly Ser Arg Gln Phe Lys Gly Ile Arg Leu Arg Lys Trp
 35 40 45
 Gly Ser Trp Val Ser Glu Ile Arg Met Pro Arg Ser Arg Lys Lys Ile
 50 55 60
 Trp Leu Gly Ser Tyr Thr Thr Pro Glu Gln Ala Ala Arg Ala Tyr Asp
 65 70 75 80
 Ala Ala Val Tyr Cys Leu Arg Gly Arg Asn Ala Glu Phe Asn Phe Ser
 85 90 95
 Val Pro Asp Ile Pro Thr Ala Ser Pro Leu Ser Arg Glu Gln Ile Gln
 100 105 110
 His Ala Ala Ala Glu Tyr Ala Leu Gly Lys Ala Pro Ser Ser Phe Pro
 115 120 125

Ser Phe Ala Gly
130

<210> 1039
<211> 241
<212> PRT
<213> Pinus radiata

<400> 1039
Met Asn Glu Pro Asp Glu His Ala Ala Ala Gln Leu Val Gln Lys Arg
1 5 10 15
Ser His Pro Leu Ala Glu Val Val Met Pro Ile Ser Val Arg Pro Leu
20 25 30
Ala Glu Lys Cys Gly Val Glu Ala Glu Glu Arg Lys Arg Ala Ala
35 40 45
Glu His Lys Lys Gln Arg Ser Lys Asn Trp Thr Arg Ala Glu Thr Leu
50 55 60 80
Lys Leu Ile Arg Leu Arg Ala Glu Met Glu Pro Arg Phe Ala Arg Ser
65 70 75 80
Gly Arg Lys Ser Glu Leu Trp Glu Glu Ile Ala Glu Ala Leu Arg Arg
85 90 95
Glu Ser Val Val Arg Asp Ala Gln Arg Cys Arg Asp Lys Trp Glu Lys
100 105 110
Leu Thr Ala Ser Tyr Lys Glu Val Arg Asp Gly Gln Arg Asp Arg Gln
115 120 125
Asp Phe Pro Phe Phe Asp Glu Leu Asp Pro Leu Leu Ser Leu Lys Pro
130 135 140
Gln Lys Ala Ala Ala Ala Ala Ala Ala Thr Ala Ala Thr Ala
145 150 155 160
Ala Asn Phe Val Ser Ala Glu Thr Pro Ser Asn Phe Pro Thr Asp Asp
165 170 175
Glu Met Thr Glu Glu Gly Ser Pro Ala Gly Lys Arg Arg Lys Thr Thr
180 185 190
Pro Arg Gly Leu Ser Ala Thr Asp Leu Asp Ala Val Arg Glu Leu Leu
195 200 205
Glu Ser Leu Val Ser Arg Gln Gln Arg Phe Phe Val Asp Leu Leu Asp
210 215 220
Ser Met Glu Arg Lys Glu Glu Ile Arg Glu Arg Ile Arg Gln Glu Lys
225 230 235 240
Glu

<210> 1040
<211> 182
<212> PRT
<213> Pinus radiata

<400> 1040
Met Val Tyr Ile Val Leu Leu Asp Leu Cys Glu Ser Val Gln Pro Pro
1 5 10 15
Gln Gly Ser Leu Gln Glu Phe Ser Asn Ser Ile Gln Glu Glu Gln Ala
20 25 30
Met Val Asp Leu Met Pro Lys Asp Ser Arg Gln Thr Met Ile Asn Asn
35 40 45
Thr Thr Ile Phe Val Gly Arg Leu Asp Pro Asn Ala Thr Asp Glu Asp
50 55 60
Leu Arg Gln Val Phe Gly Gln Tyr Gly Asp Leu Val Ser Ile Lys Ile
65 70 75 80
Pro Val Gly Lys Gly Cys Gly Phe Val Gln Phe Ala Asn Arg Ala Cys
85 90 95
Ala Glu Glu Ala Leu Gln Arg Leu His Gly Thr Val Ile Arg Gln Gln

```

      100              105              110
Thr Ile Arg Leu Ser Trp Gly Arg Ser Pro Ala Asn Lys Gln Asn Ser
      115              120              125
Gln Pro Gln Gly Gln Gln Pro Gln Ser Asp Pro Asn Gln Trp Asn Gly
      130              135              140
Ala Tyr Tyr Gly Gln Gly Tyr Glu Ser Tyr Gly Tyr Ala Pro Pro Pro
145              150              155              160
Gln Asp Pro Ala Met Tyr Ala Tyr Gly Gly Tyr Pro Gly Tyr Gly Asn
      165              170              175
Tyr Asn Gln Gln Val Ser
      180

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<210> 1041
<211> 66
<212> PRT
<213> Pinus radiata

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```

<400> 1041
Thr Ser Tyr His Arg Pro Cys Phe Lys Cys Cys His Gly Gly Cys Val
1              5              10              15
Ile Ser Pro Ser Asn Tyr Val Ala His Glu Gly Arg Leu Tyr Cys Arg
      20              25              30
His His Ser Ser Gln Leu Phe Arg Glu Lys Gly Asn Phe Ser Gln Leu
      35              40              45
Ser Lys Ala Thr Pro Thr Lys Gly Val Thr Glu Asn Ser Asp Thr Asp
      50              55              60
Asp Lys
65

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<210> 1042
<211> 152
<212> PRT
<213> Pinus radiata

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```

<400> 1042
Val Gly Gly Gly Gly Lys Gly Ser Pro Tyr Arg Gly Val Arg
1              5              10              15
Met Arg Lys Trp Gly Lys Trp Val Ser Glu Val Arg Glu Pro Asn Lys
      20              25              30
Arg Ser Arg Ile Trp Leu Gly Ser Tyr Ser Thr Pro Glu Ala Ala Ala
      35              40              45
Arg Ala Tyr Asp Thr Ala Val Phe Tyr Leu Arg Gly Pro Ser Ala Thr
      50              55              60
Leu Asn Phe Pro Glu Glu Ala Arg Lys Glu Gln Ser Asp Leu Arg
      65              70              75              80
Leu Ser Gln Leu Gly Glu Leu Ser Pro Ser Ser Ile Gln Arg Arg Ala
      85              90              95
Ala Glu Val Gly Ala Ala Val Asp His Ala Met Gln Ala Gly Pro Val
      100              105              110
Pro Ala Gln Thr Leu Arg Glu Ile Asn Gln Glu Asn Asp Met Lys Asn
      115              120              125
Ala Leu Ser Ser Lys Leu Ser Glu Gly Asn Asn Phe Lys Ile Glu Ala
      130              135              140
Lys Asn Asn Met Arg Gln Gln Gly
145              150

```

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<210> 1043
<211> 193
<212> PRT
<213> Pinus radiata

```

<400> 1043
 Met Ala Phe Ala Gly Thr Thr Gln Lys Cys Lys Ala Cys Glu Lys Thr
 1 5 10 15
 Val Tyr Leu Val Asp Gln Leu Thr Ala Asp Asn Ser Val Phe His Lys
 20 25 30
 Ser Cys Phe Arg Cys His His Cys Asn Gly Thr Leu Lys Leu Ser Asn
 35 40 45
 Tyr Ser Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe Asp Gln
 50 55 60
 Leu Phe Lys Arg Thr Gly Ser Leu Asp Lys Ser Phe Glu Ala Ile Pro
 65 70 75 80
 Arg Ala Ser Arg Asn Asp Lys Met His Glu Asn Glu Asn Arg Thr Pro
 85 90 95
 Ser Arg Val Ser Ala Leu Phe Ser Gly Thr Gln Asp Lys Cys Val Ala
 100 105 110
 Cys Gly Lys Thr Val Tyr Pro Ile Glu Lys Val Ala Val Asp Gly Thr
 115 120 125
 Ser Tyr His Arg Pro Cys Phe Lys Cys Cys His Gly Gly Cys Val Ile
 130 135 140
 Ser Pro Ser Asn Tyr Val Ala His Glu Gly Arg Leu Tyr Cys Arg His
 145 150 155 160
 His Ser Ser Gln Leu Phe Arg Glu Lys Gly Asn Phe Ser Gln Leu Ser
 165 170 175
 Lys Ala Thr Pro Thr Lys Gly Val Thr Glu Asn Ser Asp Thr Asp Asp
 180 185 190
 Lys

<210> 1044
 <211> 121
 <212> PRT
 <213> Pinus radiata

<400> 1044
 Met Val Lys Pro Leu Pro Lys Gln Ser Ser Pro Ser Gly Ser Glu Asn
 1 5 10 15
 Cys Gln Ile Lys Ser Arg Gln Phe Lys Gly Ile Arg Leu Arg Lys Trp
 20 25 30
 Gly Lys Trp Val Ser Glu Ile Arg Met Pro Asn Ser Arg Ala Lys Ile
 35 40 45
 Trp Leu Gly Ser Tyr Asp Ser Pro Glu Lys Ala Ala Arg Ala Tyr Asp
 50 55 60
 Phe Ala Leu Tyr Cys Leu Arg Gly Ser Lys Ala Thr Phe Asn Phe Pro
 65 70 75 80
 Asp Ser Pro Pro Glu Ile Pro Cys Ala Ser Asp Leu Ser Pro Pro Gln
 85 90 95
 Ile Gln Ala Ala Ala Ala Arg Phe Ala Thr Glu Asp Phe Arg Leu Pro
 100 105 110
 Ser Glu Glu Asp Ala Ala Ser Ser Ser
 115 120

<210> 1045
 <211> 131
 <212> PRT
 <213> Pinus radiata

<400> 1045
 Met Glu Ile Arg Leu Gln Gln Glu Asn Asp Gln Asp Ile Ala Pro Pro
 1 5 10 15
 His Glu Asp Arg Val Ser Arg Gln Phe Lys Gly Val Arg Pro Arg Lys
 20 25 30

Trp Gly Ile Trp Val Ser Glu Ile Arg Met Pro Arg Ser Arg Gln Lys
 35 40 45
 Ile Trp Leu Gly Ser Tyr Lys Lys Pro Glu Gln Ala Ala Arg Ala Tyr
 50 55 60
 Asp Ala Ala Val Tyr Cys Leu Arg Gly Ser Asn Ala Lys Phe Asn Phe
 65 70 75 80
 Pro Asn Ser Val Pro Asp Ile Pro Ser Ala Ser Ser Leu Ser Arg Gln
 85 90 95
 Gln Ile Gln Leu Ala Ala Lys Tyr Ala Leu Asp Gln Ser Pro Ser
 100 105 110
 Ser Pro Pro Ser Leu Asn Asn Asn Lys Glu Glu Pro Ala Ser Pro Ser
 115 120 125
 Gln Ser Ser
 130

<210> 1046
 <211> 102
 <212> PRT
 <213> Pinus radiata

<400> 1046
 Met Thr Gln Gln Thr Thr Ser Pro Thr Val Ser Pro Ala Ala Leu Ala
 1 5 10 15
 Leu Pro Thr Ser Ala Ser Ser Thr Ser Ala Lys Ser Ala Ala Val Pro
 20 25 30
 Val Pro Ala Gln Ala Asn Pro Arg Lys Arg Pro Arg Ser Asp Leu Ser
 35 40 45
 Ala Glu Glu Lys Arg Glu Ala Arg Ala His Arg Asn Arg Ile Ala Ala
 50 55 60
 Gln Asn Ser Arg Asp Lys Arg Lys Gln Gln Phe Thr Ser Leu Glu Gln
 65 70 75 80
 Arg Val Ile Asp Leu Glu Asn Glu Asn Arg Gln Leu Arg Asp Ala Leu
 85 90 95
 Ala Thr Ser Gln Pro Asn
 100

<210> 1047
 <211> 66
 <212> PRT
 <213> Pinus radiata

<400> 1047
 Leu Leu Thr Ile Phe Glu Ala Val Tyr Val His Lys Gly Ile Val Asn
 1 5 10 15
 Ala Ala Lys Val Leu Asn Leu Thr Pro Ser Ala Ile Ser Gln Ser Ile
 20 25 30
 Gln Lys Leu Arg Val Ile Phe Pro Asp Pro Leu Phe Ile Arg Lys Gly
 35 40 45
 Gln Gly Val Thr Pro Thr Ala Phe Ala Met His Leu His Glu Tyr Ile
 50 55 60
 Ser Gln
 65

<210> 1048
 <211> 106
 <212> PRT
 <213> Pinus radiata

<400> 1048
 Met Lys Gly Pro Gln Gly Ile Ser Asn Ala Gln Asn Thr Cys Thr Lys
 1 5 10 15


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      130              135              140
Lys Leu Gln Ala Ile Cys Gln Ser Leu Lys Gln Pro Leu Glu Ser Met
145              150              155
Ser Lys Thr Glu Glu Ser Glu Glu Ile Ser Cys Ala Tyr Glu Asn Ser
      165              170              175
Gly Ser Leu Gly Ser Val Arg Asp Glu Asp Ala Lys Lys Asn Asp Val
      180              185              190
Val Ser Val Lys Ser Glu Thr Cys Asp Ser Asp Ser Ser Asp Asp Ser
      195              200              205
Thr Ile Thr Ala Leu Asn Ser Ser Gly Asp Gln Asn
210              215              220

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<210> 1051
<211> 219
<212> PRT
<213> Pinus radiata

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<400> 1051
Arg Ile Glu Ala Pro Gly Arg Arg Thr Asn Pro Ala Ala Val Thr Trp
1      5      10      15
Ala Ala Ala His Phe Ser Val Lys Glu Gln Asp Arg Phe Leu Pro Ile
20      25      30
Ala Asn Val Gly Arg Ile Met Lys Lys Ala Leu Pro Ala Asn Gly Lys
35      40      45
Val Ser Lys Asp Ala Lys Glu Thr Val Gln Glu Cys Val Ser Glu Phe
50      55      60
Ile Ser Phe Ile Thr Gly Glu Ala Ser Asp Lys Cys Gln Arg Glu Lys
65      70      75      80
Arg Lys Thr Ile Asn Gly Asp Asp Leu Leu Trp Ala Met Thr Thr Leu
85      90      95
Gly Phe Glu Asp Tyr Val Glu Pro Leu Lys Ile Tyr Leu His Lys Tyr
100      105      110
Arg Glu Met Glu Gly Glu Lys Val Ser Met Ala Lys Gln Gly Asp Pro
115      120      125
Thr Pro Ser Lys Glu Gly Asn Asn Ala Ile Asn Gly Ser Ser Ile Glu
130      135      140
Asn Pro Asn Ala Asn Ala Tyr Ser Gly Leu Asn Pro Gly Gly Tyr Asn
145      150      155      160
Arg Val Gln Ser Gln Ser Leu Pro His Met Gln Gln Ala Ala Tyr Gly
165      170      175
Gln Pro Pro Gly Gly Met Val Tyr Gly His His Gly His Ile Met Gly
180      185      190
Ala Tyr Asn Met Thr Ala Pro Asn Ser Ser Gly Gly Asn Ser Ser Gly
195      200      205
Gln Gln Gln Gln Gln Ala Pro Arg Gly Gln Trp
210      215

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<210> 1052
<211> 100
<212> PRT
<213> Pinus radiata

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<400> 1052
Gly Cys Thr Thr Val Val Glu Thr Leu Ala Lys Trp Gln Glu Leu Asn
1      5      10      15
Ser Gln Val Glu Ser Ser Lys Asp Gly Ala Lys Arg Leu Arg Lys Ala
20      25      30
Pro Ala Lys Gly Ser Lys Lys Gly Cys Met Lys Gly Lys Gly Gly Pro
35      40      45
Asp Asn Gly Arg Cys Asn Tyr Arg Gly Val Arg Gln Arg Thr Trp Gly
50      55      60

```

Lys Trp Val Ala Glu Ile Arg Glu Pro Asn Arg Gly Ser Arg Leu Trp
 65 70 75 80
 Leu Gly Thr Phe Ser Ser Ala Glu Glu Ala Ala Arg Ala Tyr Asp Gln
 85 90 95
 Ala Ala Arg Val
 100

<210> 1053
 <211> 117
 <212> PRT
 <213> Pinus radiata

<400> 1053
 Met Glu Ile Val Gly Lys Ala Lys Glu Asp Val Ser Leu Pro Lys Ala
 1 5 10 15
 Thr Met Thr Lys Ile Ile Lys Glu Met Leu Pro Ala His Val Arg Val
 20 25 30
 Thr Arg Asp Ala Gln Asp Leu Leu Val Glu Cys Cys Val Glu Phe Ile
 35 40 45
 Asn Leu Ile Ser Ser Glu Ser Asn Asp Ile Cys Tyr Lys Glu Glu Lys
 50 55 60
 Arg Thr Ile Ala Pro Glu His Val Leu Glu Ser Leu Lys Ile Leu Gly
 65 70 75 80
 Phe Gly Ser Tyr Ile Arg Glu Val Lys Ala Ala Tyr Glu Gln His Arg
 85 90 95
 Ile Glu Asn Trp Asp Cys Pro Arg Ala Gly Thr Arg Trp Ser Lys Asn
 100 105 110
 Arg Leu Glu Met Thr
 115

<210> 1054
 <211> 161
 <212> PRT
 <213> Pinus radiata

<400> 1054
 Asn Ile Asn Gly Val Ala Gly Gly Val Ala Lys Glu Lys Lys Val Asn
 1 5 10 15
 Phe Pro Trp Cys Ala Leu Glu Lys Gln Val Gly Thr Ser Ser Phe Asp
 20 25 30
 Pro Asn Leu Ala Ser Ser Lys Gln Ala Met Asp Ser Leu Ile Met Gln
 35 40 45
 Gln Leu Pro Thr Phe Leu Gln Tyr Cys Lys Asp Leu Glu Glu Gly Arg
 50 55 60
 Gln Ser Trp Phe Met His Lys Lys Glu Ala Thr Trp Arg Leu Ser Arg
 65 70 75 80
 Leu Glu Gln Gln Leu Glu Ser Glu Lys Ala Arg Lys Arg Arg Glu Lys
 85 90 95
 Ile Glu Glu Val Gly Ser Lys Ile Arg Ala Leu Arg Glu Glu Glu Ile
 100 105 110
 Thr Tyr Leu Asp Lys Leu Glu Thr Glu Cys Arg Glu Gln Leu Ser Ser
 115 120 125
 Leu Gln Arg Asp Ala Glu Met Lys Glu Ala Lys Met Met Glu Leu Trp
 130 135 140
 Ala Thr Lys His Leu Gln Leu Thr Lys Phe Val Asp Ser Ala Leu Ser
 145 150 155 160
 Val

<210> 1055
 <211> 396

<212> PRT

<213> Pinus radiata

<400> 1055

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Met Ala Arg Glu Thr Asn Ser Phe Ala Leu Leu Gly Gly Asp Asp Asp
 1          5          10          15
Gln Gly Asp Asp Leu Met Ala Leu Ile Asn Ser Ala Ala Thr Leu
 20          25          30
Lys Pro Glu Lys Lys Pro Lys Thr Thr Ala Lys Lys Asn Gly Gln Gln
 35          40          45
Gln Pro Pro Pro Gln Ser Gln Pro Ala Lys Leu Pro Ser Lys Pro
 50          55          60
Leu Pro Pro Ala Glu Ala Val Arg Ala Asp Arg Gly Arg Gly Arg Gly
 65          70          75          80
Gly Arg Gly Arg Gly Gly Gly Arg Gly Ser Arg Phe Glu Gly Gly Glu
 85          90          95
Tyr Asn Thr Glu Ser Asn Gly Tyr Gly Gly Gly Gly Gly Gly Gly
100          105          110
Gly Arg Gly Trp Gly Arg Asp Glu Asp Ser Gly Asn Arg Gly Trp Gly
115          120          125
Arg Glu Glu Asp Thr Gly Gly Arg Gly Trp Gly Arg Ser Asn Gly Glu
130          135          140
Glu Asp Thr Gly Gly Arg Gly Trp Ser Arg Ser Asn Gly Glu Asp Asp
145          150          155          160
Ala Ala Ala Gly Gly Gly Gln Ser Arg Gly Arg Gly Arg Gly Arg Gly
165          170          175
Arg Gly Arg Gly Phe Gly Gly Arg Gly Ser Gly Arg Phe Gly Gly Gly
180          185          190
Gly Asp Ser Tyr Gly Tyr Asp Ala Asn Gly Gln Asp Arg Pro Pro Arg
195          200          205
Gln Gln Phe Glu Asp Thr Asn Thr Phe Thr Gly Thr Asp Asn Trp Asp
210          215          220
Thr Pro Glu Val Ser Val Val Asp Glu Ala Lys Asn Val Glu Pro Glu
225          230          235          240
Gln Lys Lys Pro Glu Glu Glu Ala Thr Pro Gly Val Thr Ser Glu Asn
245          250          255
Lys Asp Asn Lys Glu Glu Glu Asp Asn Glu Met Thr Leu Asp Glu Tyr
260          265          270
Glu Lys Leu Leu Asn Glu Lys Arg Lys Thr Leu Glu Ala Leu Lys Asn
275          280          285          290
Ala Glu Arg Lys Val Ile Leu Asp Arg Asp Phe Glu Lys Met Gln Leu
295          300          305
Val Asp Lys Lys Asn Asp Gly Ile Phe Ile Lys Leu Asn Ser Glu Lys
310          315          320
Glu Arg Gln Arg Lys Lys Glu Thr Leu Glu Lys Glu Glu Arg Ala Arg
325          330          335
Lys Ser Val Ser Ile Asn Glu Phe Leu Lys Pro Ala Asp Gly Glu Arg
340          345          350
Tyr Phe Thr Pro Ser Gly Thr Arg Gly Arg Gly Arg Gly Arg Gly Arg
355          360          365
Gly Arg Gly Asp Gly Val Ser Thr Arg Gly Gly Phe Gly Arg Tyr
370          375          380
Ser Asp Ala Asp Gln Val Ala Pro Cys Ile Glu
385          390          395

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<210> 1056

<211> 120

<212> PRT

<213> Pinus radiata

<400> 1056

Thr Trp Ala Gln Glu Glu Glu Lys Ser Pro Arg Ala Ile Gly Gly Glu
 1 5 10 15
 Lys Gly Gly Arg Gly Leu Arg Gln Phe Ser Met Lys Val Cys Gln Lys
 20 25 30
 Val Glu Ser Lys Gly Arg Thr Thr Tyr Asn Glu Val Ala Asp Glu Leu
 35 40 45
 Val Ala Glu Tyr Ala Asn Pro Asn Ser Ala Leu Ile Ser Pro Asp Gln
 50 55 60
 Gln Gln Tyr Asp Glu Lys Asn Ile Arg Arg Arg Val Tyr Asp Ala Leu
 65 70 75 80
 Asn Val Leu Met Ala Met Asp Ile Ile Ser Lys Asp Lys Lys Glu Ile
 85 90 95
 Gln Trp Lys Gly Leu Pro Ser Thr Ser Pro Asn Asp Leu Glu Asp Leu
 100 105 110
 Lys Ala Lys Arg Met Gly Leu Arg
 115 120

<210> 1057
 <211> 78
 <212> PRT
 <213> Pinus radiata

<400> 1057
 Pro Met Lys Leu Tyr Arg Gly Val Arg Gln Arg His Trp Gly Lys Trp
 1 5 10 15
 Val Ala Glu Ile Arg Leu Pro Arg Asn Arg Thr Arg Leu Trp Leu Gly
 20 25 30
 Thr Phe Asp Thr Ala Glu Asp Ala Ala Leu Ala Tyr Asp His Glu Ala
 35 40 45
 Tyr Lys Leu Arg Gly Glu Asn Ala Arg Leu Asn Phe Pro His Leu Phe
 50 55 60
 Leu Asn Lys Gly Ser Thr Ser Pro Lys Ala Cys Ser Val Ala
 65 70 75

<210> 1058
 <211> 171
 <212> PRT
 <213> Pinus radiata

<400> 1058
 Ser Phe Ser Cys Arg Ile Arg His Gln Thr Glu Pro Thr Leu Ile Leu
 1 5 10 15
 Ile Asp Thr Ala Gly Cys Asp Met Glu Glu Lys Lys Asp Asp Glu Asp
 20 25 30
 Ser Thr Met Asn Glu Gly Glu Ala Thr Val Thr Leu Met His Ala Lys
 35 40 45
 Lys Leu Leu Glu Ser Gly Val Asn Pro Ser Asp Ile Gly Ile Ile Thr
 50 55 60
 Pro Tyr Ala Ala Gln Val Gly Leu Leu Lys Ile Met Arg Ser Lys Glu
 65 70 75 80
 Met Lys Leu Lys Asp Leu Glu Ile Ser Thr Val Asp Gly Phe Gln Gly
 85 90 95
 Arg Glu Lys Glu Ala Ile Val Ile Ser Met Val Arg Ser Asn Ala Lys
 100 105 110
 His Glu Val Gly Phe Leu Asn Asp Arg Arg Met Asn Val Ala Val
 115 120 125
 Thr Arg Ala Arg Arg Gln Cys Cys Ile Ile Cys Asp Thr Glu Thr Val
 130 135 140
 Ser Ser Asp Lys Phe Leu Lys Arg Leu Val Glu Tyr Phe Glu Glu His
 145 150 155 160
 Ala Glu Tyr Leu Ser Ala Ser Glu Tyr Leu Thr

165

170

<210> 1059
 <211> 94
 <212> PRT
 <213> Pinus radiata

<400> 1059
 Glu Lys Cys Ser Asp Gln Val Ser Gly Ser Thr Ser Ser Cys Arg Ile
 1 5 10 15
 Arg His Glu Leu Gly Tyr Ser Arg Ser Ala Lys Arg Cys Lys Glu Lys
 20 25 30
 Trp Glu Asn Ile Asn Lys Tyr Phe Arg Lys Ala Lys Glu Ser Asn Lys
 35 40 45
 Lys Arg Pro Glu Asn Ala Lys Thr Cys Pro Tyr Phe His Gln Leu Asp
 50 55 60
 Ala Leu Tyr Lys Lys Arg Asn Leu Gly Asn Arg His Asn Lys Ile Met
 65 70 75 80
 Val Leu Ser Ile Phe Ser Val Ala Ser Thr Gly Leu Phe Met
 85 90

<210> 1060
 <211> 174
 <212> PRT
 <213> Pinus radiata

<400> 1060
 Met Ala Pro Ser Asn Asn Arg Arg Asp Asp Asn Gly Ala Arg Gly Val
 1 5 10 15
 His Phe Arg Gly Val Arg Lys Arg Pro Trp Gly Arg Tyr Ala Ala Glu
 20 25 30
 Ile Arg Asp Pro Trp Lys Lys Val Arg Leu Trp Leu Gly Thr Phe Asp
 35 40 45
 Thr Ala Glu Glu Ala Ala Arg Ala Tyr Asp Thr Ala Ala Ile Ser Leu
 50 55 60
 Arg Gly Pro Lys Ala Lys Thr Asn Phe Ala Tyr Ser Ser Pro Ser Ser
 65 70 75 80
 Ser Ser Ser Leu His Asn Asn Gln Ser Ser Ser Gln Asn Ser Ser Thr
 85 90 95
 Val Glu Ser Trp Pro Ser Ala Ala Pro Val Thr Arg Ser Gly Asp Leu
 100 105 110
 Glu Leu Pro Ala Ser Phe Leu Pro Arg Leu Gly Val Ser Thr Gly Arg
 115 120 125
 Arg Val Leu Asn Gly Gly Asn Pro Arg Ser Gly Arg Arg Arg Ser Leu
 130 135 140
 Ser Glu Lys Asn Ser Gly Arg Lys Ala Glu Gly Ala Glu Ala Arg Thr
 145 150 155 160
 Thr Leu Ser Asp Ser Asp Ser Ser Ser Ser Ala Val Leu Asp
 165 170

<210> 1061
 <211> 121
 <212> PRT
 <213> Pinus radiata

<400> 1061
 Met Gly Pro Leu Met Gly Ser Pro Leu Gly Gly Gly Leu Gly Leu Ser
 1 5 10 15
 Pro Arg Met Gly Gly Gly Ile Gly Asn Gly Leu Gln Gly Gly Leu Gly
 20 25 30
 Val Gly Leu Ala Gly Leu Gly Ala Thr Ala Leu Thr Ile Gly Ala Ala

```

          35              40              45
Ser Pro Ala Asn Gln Leu Ser Ser Asp Gly Met Gly Asn Ser His Gly
50
Asp Asn Ser Thr Val Ser Pro Ile Pro Tyr Gly Leu Asp Val Ser Val
65
Arg Gly Arg Lys Arg Gly Gly Pro Val Glu Lys Val Val Glu Arg Arg
85
Gln Arg Arg Met Ile Lys Asn Arg Glu Ser Ala Ala Arg Ser Arg Ala
100
Arg Lys Gln Ala Tyr Thr Val Asn Trp
115              120

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<210> 1062
 <211> 145
 <212> PRT
 <213> Pinus radiata

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<400> 1062
Glu Thr Arg Gly Gly Ser Ser Gly Asp Phe Leu Pro Pro Pro Pro Thr
1      5      10      15
Thr Lys Cys Ser Glu Glu Leu Gln Asn Lys Ile Thr Lys Tyr Ile Ala
20      25      30
Leu Lys Ser Ala Gly Arg Ser Phe Asn Lys Glu Leu Arg Asn Ser Lys
35      40      45
Gly Tyr Arg Asn Pro Asp Phe Leu Gln Arg Ala Val Lys Tyr Gln Gly
50      55      60
Ile Asp Gln Ile Gly Ser Cys Phe Lys Lys Glu Ile Phe Asp Pro His
65      70      75      80
Gly Tyr Asp Pro Ser Asp Tyr Tyr Asp Ala Leu Ala Leu Glu Leu Lys
85      90      95
Arg Glu Phe Glu Arg Arg Glu Gln Glu Lys Gln Lys Asn Gln Arg Val
100      105      110
Asp Phe Val His Gly Ala Val Gln Thr Thr Ser Val Gln Ser Val Ser
115      120      125
Lys Pro Ile Val Gln Val Met Gly Gly Gln Lys Val Pro Val Val Gly
130      135      140
Val
145

```

<210> 1063
 <211> 236
 <212> PRT
 <213> Pinus radiata

```

<400> 1063
Met Ser Ser Pro Gln Ser Asn Lys Trp Leu Ser Tyr Phe Asp Glu Pro
1      5      10      15
Leu Leu Asp Asp Val Gly Val Gly Gln Pro Ala Asn Pro Phe Phe Trp
20      25      30
Cys Gly Gln Gly Ile Asn Asp Gln Pro Asp Val Ser Val Glu Ile Asp
35      40      45
Gly Pro Asn Lys Asp Met Asp Glu Gln Asp Lys Leu Cys Pro Arg Lys
50      55      60
Arg Ser Arg Glu Glu Ser Ser Gly Gly Pro Gly Ser Lys Ala Cys Arg
65      70      75      80
Glu Lys Met Arg Arg Asp Arg Leu Asn Asp Arg Phe Met Glu Leu Ser
85      90      95
Ser Val Leu Glu Pro Gly Arg Pro Pro Lys Thr Ala Asp Lys Ala Thr
100      105      110
Ile Leu Ser Asp Ala Ala Arg Val Met Thr Gln Leu Arg Thr Glu Ala
115      120      125

```


Gln Asn Leu Lys Ala Glu Asn Glu Arg Leu Gln Glu Ala Ile Lys Asp
 130 135 140
 Leu Lys Ala Glu Lys Asn Glu Leu Arg Asp Glu Lys Leu Arg Met Lys
 145 150 155 160
 Ala Glu Lys Glu Lys Leu Asp Gln Gln Val Lys Ala Met Ala Leu Pro
 165 170 175
 Thr Gly Phe Val Pro His Pro Ala Ala Phe His Ala Ala Ala Phe
 180 185 190
 Ala Ala Gln Ser Gln Ala Ala Ala Asn Lys Thr Met Pro Val Pro Gly
 195 200 205
 Tyr Pro Gly Met Ala Met Trp Gln Trp Met Pro Pro Ala Val Val Asp
 210 215 220
 Thr Ser Gln Asp His Val Leu Arg Pro Pro Val Ala
 225 230 235

<210> 1064

<211> 145

<212> PRT

<213> Pinus radiata

<400> 1064

Met Gly Ser Arg Thr Met Leu Ser Ser Asn Gly Gly Arg Thr Pro Gln
 1 5 10 15
 Phe Gln Pro Leu Val Arg Gln Asn Ser Leu Tyr Asn Leu Thr Leu Glu
 20 25 30
 Glu Val Gln Asn Gln Leu Gly Asp Ala Ser Lys Pro Leu Ser Ser Met
 35 40 45
 Asn Met Asp Glu Leu Leu Lys Asn Ile Trp Thr Gln Glu Glu Ser Gln
 50 55 60
 Ala Ile Ser Met Ala Ile Gly Asn Gly Pro Met Asn Gly Val Pro Pro
 65 70 75 80
 Asn Ser Ala Pro Ala Ser Gly Gly Leu Gln Arg Gln Gly Ser Leu Thr
 85 90 95
 Ile Pro Arg Thr Leu Ser Arg Lys Thr Val Asp Glu Val Trp Arg Asp
 100 105 110
 Ile Gln Gln Ser Gln Gly Lys Ser Asn Glu Glu Lys Lys Pro Gln Gln
 115 120 125
 Arg Gln Ser Thr Phe Gly Glu Met Thr Leu Glu Asp Phe Leu Val Lys
 130 135 140
 Ala
 145

<210> 1065

<211> 171

<212> PRT

<213> Pinus radiata

<400> 1065

Met Ala Ser Gly Asn Val Asp Pro Asp Gln Trp Glu Phe Ala Asn Glu
 1 5 10 15
 Asp Phe Leu Arg Gly Gln Arg Asn Leu Leu Lys Asn Ile His Arg Arg
 20 25 30
 Lys Pro Met His Ser His Ser Gln Asn Pro Gln Gln Gly Val Cys Asn
 35 40 45
 Asp Ala Ile Lys Tyr Glu Leu Glu Glu Ile Gln Arg Leu Lys Arg
 50 55 60
 Asp Lys Gly Leu Leu Met Met Glu Leu Val Arg Ile Arg Gln Gln His
 65 70 75 80
 Gln Gly Thr Glu Met His Met Gln Thr Leu Glu Glu Arg Leu Gln Ala
 85 90 95
 Met Glu His Arg Gln Gln Met Met Ala Phe Leu Ala Lys Ala Val

Gln	Lys	Pro	100	Phe	Val	Ala	Gln	Leu	Val	Gln	Gln	Ser	110	Asn	Asn
Lys	Leu	Leu	115	Ala	Ala	Asn	120	Lys	Arg	Arg	Leu	125	Lys	Gln	Glu
Asn	Cys	Ser	130	Glu	Ala	Gly	135	Glu	Thr	Glu	Leu	140	Ser	Gln	Ile
Lys	Tyr	Gln	155	Pro	Ala	Ser	165	Gly	Asp	Glu	Cys	170	Ser		160

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<210> 1066
<211> 112
<212> PRT
<213> Pinus radiata
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<400> 1066																	
Val	Ala	Ala	Ala	Ser	Ala	Ser	Ala	Ser	Gly	Thr	Ala	Val	Ala	Ala	Ser		
1				5					10					15			
Leu	Pro	Val	Asn	Gly	Ala	Ala	Gly	Val	Arg	Ser	Ser	Val	Asp	Ser	Glu		
			20					25					30				
His	Ser	Asp	Ile	Glu	Ala	Ser	Phe	Lys	Glu	Ala	Glu	Cys	Ser	Gln	Ala		
		35					40					45					
Ile	Val	Glu	Arg	Arg	Pro	Arg	Lys	Arg	Gly	Arg	Lys	Pro	Ala	Asn	Gly		
	50					55					60						
Arg	Glu	Glu	Pro	Leu	Asn	His	Val	Glu	Ala	Glu	Arg	Gln	Arg	Arg	Glu		
65					70					75					80		
Lys	Leu	Asn	Gln	Arg	Phe	Tyr	Ala	Leu	Arg	Ala	Val	Val	Pro	Asn	Val		
				85					90					95			
Ser	Lys	Met	Asp	Lys	Ala	Ser	Leu	Leu	Gly	Asp	Ala	Ile	Ser	Tyr	Ile		
			100					105					110				

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<210> 1067
<211> 73
<212> PRT
<213> Pinus radiata
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[illegible]

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<210> 1068
<211> 203
<212> PRT
<213> Pinus radiata
```

<400> 1068															
Asn	Met	Ala	Lys	His	Thr	Val	Cys	Ala	Ser	Phe	Leu	Asn	Glu	Gly	Asp
1				5					10					15	
Phe	Ile	Cys	Pro	Tyr	Glu	Asp	Gly	Ile	Gly	Leu	Glu	Trp	Leu	Ser	
		20					25					30			
Asp	Phe	Val	Glu	Asp	Ser	Phe	Ala	Ala	Thr	Gly	Ser	Ser	Asn	Ser	Gly
		35					40					45			
Ser	Leu	Ala	Asp	Leu	Ser	Lys	Asp	Lys	Ile	Asp	Asp	Asn	Arg	Glu	Lys

```

50          55          60
Lys Lys Gln Asn Pro Thr Asp Glu Ala Ile Ile Pro Glu Ile Pro Pro
65          70          75          80
Ile Lys Glu Thr Pro Arg Ser Gln Arg Ala Val Pro Gly Arg Ala Arg
85
Ser Lys Arg Arg Arg Ser Ser Gly Ala Pro Ile Arg Gly Trp Ser Thr
100
Ser Glu Asp Tyr Ala Leu Gln Asn Glu Gly Gly Met Lys Thr Val Thr
115          120          125          130
Gly Ala Asp Ala Ile Asn His Tyr Gln Ser Ser Ala Pro Gln Gln Gln
135
Pro Arg Arg Cys Thr His Cys Leu Ser Gln Arg Thr Pro Gln Trp Arg
145          150          155          160
Leu Gly Pro Leu Gly Pro Lys Thr Leu Cys Asn Ala Cys Gly Val Arg
165          170          175          180
Phe Lys Ser Gly Arg Leu Phe Pro Glu Tyr Arg Pro Ala Lys Ser Pro
185
Thr Phe Ile Arg Tyr Ile His Ser Asn Ser His
195          200

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<210> 1069

<211> 190

<212> PRT

<213> Pinus radiata

<400> 1069

```

Gly Asn Ala Ala Arg Arg Pro His Asp Val Leu Leu Lys Leu Glu Lys
1          5          10          15
Leu Ser Ser Gln Thr Thr Leu Glu Ser Leu Gln Arg Leu Ile Val Gln
20          25          30
Lys Lys Cys Leu Leu Phe Gly Lys Lys Val Gly Ile Arg Ile Asp Gly
35          40          45
Lys Lys Thr Ala Asn Thr Glu Lys Val Asn Glu Arg Asn Thr Ile Pro
50          55          60
Arg Ile Ile Phe Gly Ala Leu Thr Phe Thr Arg Asn Arg Pro His Ala
65          70          75          80
Leu Ser Lys Asn Gly Ser Ile Ala Asp Thr Arg Arg Asn Ile Cys Gly
85          90          95
Ala Pro Gln Glu Asp Gly Thr Ile Cys Thr Ala Ile Pro Leu Lys Ser
100          105          110
Arg Lys Arg Cys Pro Asp His Lys Gly Gln Lys Gly Gln Lys Glu Lys
115          120          125
Asn Leu Ser Lys Ile Asn Ile Ser Ala Asn Val Glu Ser Arg Asn Gln
130          135          140
Gly Val Gly Glu His Glu Asn Glu Tyr Arg Tyr Cys Gly Val Leu Leu
145          150          155          160
Lys Asp Gly Ser Thr Cys Lys Ile Ile Pro Asp Lys Gly Arg Lys Arg
165          170          175
Cys Asn Ile His Lys Gly Met Arg Ile Pro Gly Gln Ala Lys
180          185          190

```

<210> 1070

<211> 81

<212> PRT

<213> Pinus radiata

<400> 1070

```

Met Ala Thr Ser Asn Pro Phe Asp Leu Leu Gly Asp Asp Asp Asn Gly
1          5          10          15
Asp Val Ser Gln Leu Val Phe Val Pro Gln Glu Lys Pro Thr Val Lys
20          25          30

```

Lys Ala Ser Gln Pro Ala Gln Thr Ala Thr Ala Lys Leu Pro Ser Lys
 35 40 45
 Pro Leu Pro Pro Ala Gln Ala Val Arg Glu Ser Arg Asn Gly Val Gly
 50 55 60
 Arg Gly Gly Arg Gly Gly Arg Gly Gly Asp Arg Asn Gln Asp Val Gly
 65 70 75 80
 Tyr

<210> 1071
 <211> 154
 <212> PRT
 <213> Pinus radiata

<400> 1071
 Met Asn Arg Glu Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1 5 10 15
 Gly Lys Gly Thr Met Arg Arg Lys Lys Lys Thr Ile His Arg Thr Thr
 20 25 30
 Thr Thr Asp Asp Lys Lys Leu Gln Ser Thr Leu Lys Arg Ile Gly Val
 35 40 45
 Asn Ala Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Leu Glu Asp Ser
 50 55 60
 Val Ile His Phe Gln Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn
 65 70 75 80
 Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Arg Leu Gln Asp Leu
 85 90 95
 Leu Pro Gly Ile Ile Asn Gln Leu Gly Pro Asp Ser Phe Ala Asn Leu
 100 105 110
 Arg Lys Leu Ala Gln Gln Phe Gln Lys Glu Val Pro His Pro Ala Val
 115 120 125
 Glu Glu Asp Asp Asp Val Pro Glu Leu Val Glu Gly Glu Thr Phe
 130 135 140
 Glu Glu Ala Ala Lys Gln Glu Ser Ala Ala
 145 150

<210> 1072
 <211> 63
 <212> PRT
 <213> Pinus radiata

<400> 1072
 Met Pro His Gln His Gln His Gln Glu Arg Phe Pro Ser Gln Glu Gly
 1 5 10 15
 Ile Ser Trp Lys Arg Asp Asp Glu Leu Pro Gln Pro Gln Asn Pro Pro
 20 25 30
 Lys Lys Lys Arg Tyr Arg Gly Val Arg Gln Arg Pro Trp Gly Lys Trp
 35 40 45
 Ala Ala Glu Ile Arg Asp Pro Lys Lys Ala Ala Arg Val Trp Leu
 50 55 60

<210> 1073
 <211> 331
 <212> PRT
 <213> Pinus radiata

<400> 1073
 Met Gly Gln Ile Gly Gly Pro His Gly Tyr Pro Asn Ser Ser Pro Ser
 1 5 10 15
 Ala Gln Asp Ala Leu Tyr Glu Glu Leu Trp His Ala Cys Ala Gly Pro
 20 25 30

```

Leu Val Thr Leu Pro Arg Ile Gly Glu Arg Val Phe Tyr Phe Pro Gln
35 40
Gly His Met Glu Gln Val Glu Ala Ser Thr Asn Gln Gly Ala Asp Gln
50 55
His Met Pro Leu Phe Asn Leu Pro Tyr Lys Ile Leu Cys Arg Val Ile
65 70 75
Asn Val Gln Leu Lys Ala Glu Pro Asp Thr Asp Glu Val Phe Ser Gln
85 90 95
Ile Thr Leu Leu Pro Glu Ala Glu Gln Asp Glu Ser Ser Val Glu Lys
100 105 110
Glu Pro Leu Thr Pro Leu Pro Pro Lys Pro Leu Val Tyr Ser Phe Cys
115 120 125
Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly Phe Ser Val
130 135 140
Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro Leu Asp Met Ser Gln
145 150 155
Gln Pro Pro Ser Gln Asp Leu Val Ala Lys Asp Leu His Gly Val Glu
165 170 175
Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro Arg Arg His Leu Leu
180 185 190
Thr Thr Gly Trp Ser Val Phe Val Ser Ser Lys Arg Leu Val Ala Gly
195 200 205
Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly Glu Leu Arg Val Gly
210 215 220
Val Arg Arg Ala Met Arg Gln Gln Asn Asn Val Pro Ser Ser Val Ile
225 230 235
Ser Ser His Ser Met His Leu Gly Val Ile Ala Thr Ala Ser His Ala
245 250 255
Val Thr Thr Lys Thr Met Phe Ser Val Tyr Tyr Lys Pro Arg Thr Ser
260 265 270
Pro Ser Glu Phe Ile Ile Pro Tyr Asp Gln Tyr Met Glu Ser Met Lys
275 280 285
Ile Asn Phe Ser Val Gly Met Arg Phe Lys Met Lys Phe Glu Gly Glu
290 295 300
Glu Val Pro Glu Gln Arg Phe Thr Gly Thr Ile Val Gly Ile Ser Asp
305 310 315
Ala Asp Pro Val Asn Trp Pro Asn Ser Lys Trp
325 330

```

<210> 1074
 <211> 113
 <212> PRT
 <213> Pinus radiata

```

<400> 1074
Met Thr Gln Ala Thr Asn Tyr Thr Ala Gly Thr Ile Arg Asp Asp Gln
1 5 10 15
Glu Glu Gln Cys Val Arg Arg Gly Pro Trp Thr Val Asp Glu Asp Met
20 25 30
Ser Leu Ile Arg Cys Val Thr Thr Arg Gly Glu Gly Arg Trp Asn Thr
35 40 45
Val Ala Lys Phe Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu
50 55 60
Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Lys Arg Gly Asn Ile Thr
65 70 75 80
Pro Glu Glu Gln Leu Leu Ile Leu Glu Leu His Arg Leu Trp Gly Asn
85 90 95
Arg Trp Ser Lys Ile Ala Arg Gln Leu Pro Gly Arg Thr Asp Asn Glu
100 105 110
Ile

```

<210> 1075
 <211> 44
 <212> PRT
 <213> Pinus radiata

<400> 1075
 Met Ala Glu Asn Tyr Gly Ser Pro Asp Ser Ser Pro Arg Ser Glu Asn
 1 5 10 15
 Glu Ser Gly Gly Gly His Met Gly Gly Ser Asp Phe Ser Val Lys Glu
 20 25 30
 Gln Asp Arg Phe Leu Pro Ile Ala Asn Val Gly Arg
 35 40

<210> 1076
 <211> 282
 <212> PRT
 <213> Pinus radiata

<400> 1076
 Met Pro Met Leu Ala Glu Thr Tyr Arg Asp Ser Phe Glu Thr Thr Ser
 1 5 10 15
 Gly Gly Ser Ser Val Asp Leu Val Gly Met Ala Leu Pro Gly Leu Ala
 20 25 30
 Pro Asn Leu Ser Ser Ala Ser Val Ser Ala Ser Ala Ser Glu Asp Ser
 35 40 45
 Ala Lys Lys Ile Arg Lys Pro Tyr Thr Ile Thr Lys Ser Arg Glu Ser
 50 55 60
 Trp Ser Glu Gln Glu His Asp Lys Phe Leu Glu Ala Leu Gln Leu Phe
 65 70 75 80
 Asp Arg Asp Trp Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr Val
 85 90 95
 Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln Lys
 100 105 110
 Asn Gly Thr Arg Glu His Val Pro Pro Pro Arg Pro Lys Arg Lys Ala
 115 120 125
 Ser His Pro Tyr Pro Gln Lys Ala Ser Lys Asn Val Pro Val Ser Gln
 130 135 140
 Gln Val Ser Thr Ala Phe Pro Thr Ala Ala Thr Gln Leu Asp Ser Gly
 145 150 155 160
 Tyr Tyr Pro Arg Ala Glu Ser Ser Ser Ile Leu Thr Lys Ser Gly Ser
 165 170 175
 Ser Cys Pro Thr Val Ser Ser Trp Val His His Thr Ile Pro Ser Ile
 180 185 190
 Asp Ala Ser Phe Val Glu Lys Asp Asp Gly Gly Pro Gly Ile Glu
 195 200 205
 Thr Gly Asn Asn Cys Ser Ser Gly Ser Thr Glu Ser Ser Pro Pro Thr
 210 215 220
 Trp Pro Pro Cys Ser Glu Ile Pro Glu Lys Val Lys Pro Asp Phe Ser
 225 230 235 240
 Gln Val Tyr Lys Phe Ile Gly Ser Val Phe Asp Pro Ser Thr Thr Asp
 245 250 255
 His Leu Lys Lys Leu Lys Glu Trp Ile Gln Leu Ile Leu Lys Leu Cys
 260 265 270
 Cys Thr His Glu Glu Pro Phe His Asn Leu
 275 280

<210> 1077
 <211> 104
 <212> PRT
 <213> Pinus radiata

<400> 1077
 Met Gly Arg Ser Phe Ser Cys Trp Ser Cys Ser Lys Asp Asn Gly His
 1 5 10 15
 Glu Arg Leu Asn Arg Gly Ser Trp Ser Ala Glu Glu Asp Thr Ile Leu
 20 25 30
 Ser Glu His Ile Lys Thr His Gly Val Gly Arg Trp Thr Ser Leu Pro
 35 40 45
 Lys Lys Ala Gly Leu Lys Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp
 50 55 60
 Phe Asn Tyr Leu Arg Ser Asp Ile Lys His Gly Asn Ile Ser Pro Glu
 65 70 75 80
 Glu Glu Glu Leu Leu Ile Arg Leu His Arg Leu Leu Gly Asn Arg Trp
 85 90 95
 Ser Leu Ile Ala Gly Arg Leu Pro
 100

<210> 1078
 <211> 93
 <212> PRT
 <213> Pinus radiata

<400> 1078
 Met Asp Arg Asp Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1 5 10 15
 Gly Lys Gly Thr Val Arg Arg Lys Lys Lys Ala Val His Arg Ala Thr
 20 25 30
 Thr Thr Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Leu Gly Val
 35 40 45
 Asn Thr Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Glu Met
 50 55 60
 Val Ile His Phe Ile Asn Pro Lys Val Gln Ala Ser Ile Asn Ala Asn
 65 70 75 80
 Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Asn Leu
 85 90

<210> 1079
 <211> 118
 <212> PRT
 <213> Pinus radiata

<400> 1079
 Met Asp Arg Asp Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1 5 10 15
 Gly Lys Gly Thr Val Arg Arg Lys Lys Lys Ala Val His Arg Ala Thr
 20 25 30
 Thr Thr Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Leu Gly Val
 35 40 45
 Asn Thr Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Glu Met
 50 55 60
 Val Ile His Phe Ile Asn Pro Lys Val Gln Ala Ser Ile Asn Ala Asn
 65 70 75 80
 Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Asn Leu Gln Asp Leu
 85 90 95
 Leu Pro Gly Ile Ile Asn Gln Leu Gly Pro Asp Asn Leu Ile Asn Leu
 100 105 110
 Lys Lys Ile Ala Gln Gln
 115

<210> 1080
 <211> 191

<212> PRT
 <213> Pinus radiata

<400> 1080
 Asp Asp Glu Glu Ala Ser Leu Lys Gly Lys Val Arg Trp Gly Leu
 1 5 10 15
 Asp Ser Ile Ala Ala Leu Gly Leu Lys Phe Ile Lys Arg Ala Leu Ala
 20 25 30
 Lys Lys Lys Thr Val Gly Ile Ala Gly Gly Ala Asp Arg Val Leu Leu
 35 40 45
 Ser Gly Arg Met Lys Leu Lys Pro Lys Gly Leu Met Cys Val Phe Cys
 50 55 60
 Gly Leu Leu Arg Val Arg Gly Asn Gly Ile Ile Gly Val Lys Val Phe
 65 70 75 80
 Leu Glu Lys Tyr Ala Gly Ser Ser Gln Gln Glu Ile Leu Arg Val Glu
 85 90 95
 Ile Ser Leu Ser Phe Ala Phe Gln Asn Glu Asp Arg Leu Leu Pro Ala
 100 105 110
 Ala Ser Gly Arg Gly Lys Glu Glu Ser Gln Phe Arg Ala Met Ala Cys
 115 120 125
 Met Cys Trp Ala Thr Cys Val Pro Thr Cys Cys Trp Glu Pro Cys Cys
 130 135 140
 Ile Phe Ser Ser Arg Ser Gln Ala Gly Gly Cys Leu Asn Lys Gln Glu
 145 150 155 160
 Val Asp Ala His Ile Pro Asn Tyr Pro Asn Leu Pro Pro Gln Leu Ile
 165 170 175
 Cys His Tyr Thr Met Leu Leu Cys Arg Gln Met Trp Arg Gln Met
 180 185 190

<210> 1081
 <211> 86
 <212> PRT
 <213> Pinus radiata

<400> 1081
 Ile Asp Ser Ser Glu Lys Arg Leu Lys Gly Lys Asn Tyr Ile Asp Ile
 1 5 10 15
 Thr Thr Glu Arg Ala Ala Gln Glu Pro Gly Cys Ile Met Ala Arg Pro
 20 25 30
 Gln Arg Tyr Arg Gly Val Arg Gln Arg His Trp Gly Ser Trp Val Ser
 35 40 45
 Glu Ile Arg His Pro Leu Leu Lys Thr Arg Ile Trp Leu Gly Thr Phe
 50 55 60
 Glu Thr Ala Glu Asp Ala Ala Arg Ala Tyr Asp Glu Ala Ala Arg Met
 65 70 75 80
 Met Cys Gly Pro Arg Ala
 85

<210> 1082
 <211> 119
 <212> PRT
 <213> Pinus radiata

<400> 1082
 Met Val Arg Ser Pro Cys Cys Asp Lys Val His Thr Asn Asn Lys Gly
 1 5 10 15
 Ala Trp Thr Lys Glu Glu Asp Glu Arg Leu Ile Ala His Ile Glu Ala
 20 25 30
 His Gly Glu Gly Ser Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu
 35 40 45
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro


```

50          55          60
Asp Leu Lys Arg Gly Ser Phe Ser Glu Glu Glu Asp Asp Leu Ile Ile
65          70          75          80
Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg
85          90          95
Leu Gln Gly Glu Arg Thr Thr Lys Ile Lys Asn Tyr Trp Asn Thr His
100        105        110
Met Lys Arg Lys Leu Leu Ser
115

```

<210> 1083
 <211> 128
 <212> PRT
 <213> Pinus radiata

```

<400> 1083
Met Gly Arg Ser Pro Cys Pro Pro Lys Glu Ala Leu Asn Arg Gly Ala
1          5          10          15
Trp Thr Gly Met Glu Asp Thr Ile Leu Thr Glu Tyr Ile Arg Val His
20          25          30
Gly Ser Gly Gly Trp Lys Asp Ile Ser Lys Arg Ala Gly Leu Lys Arg
35          40          45
Cys Ala Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp
50          55          60
Ile Lys Arg Gly Asn Ile Ser Pro Glu Glu Glu Glu Leu Ile Ile Arg
65          70          75          80
Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu
85          90          95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Met
100        105        110
Ser Lys Lys Pro Trp Leu Ser Met Asp Glu Ser Gln Ser Asn Thr Ser
115        120        125

```

<210> 1084
 <211> 126
 <212> PRT
 <213> Pinus radiata

```

<400> 1084
Glu Glu Glu Asp Glu Glu Glu Ala Gly Lys Glu Leu Glu Ala Trp Glu
1          5          10          15
Arg Ala Tyr Ala Asp Glu Arg Ser Trp Glu Thr Leu Gln Glu Asp Glu
20          25          30
Glu Gly Leu Leu Asn Phe Asp Lys Lys Gln Gln Gln Gln Gln Arg
35          40          45
Gln Tyr Arg Arg Arg Leu Gln Ser Ala Ala Ala Ala Ser Asn Ile
50          55          60
Gln Arg Gly Leu Ile Arg Tyr Leu Tyr Ile Ile Ile Asp Phe Ser Arg
65          70          75          80
Ala Ala Ala Glu Lys Asp Phe Lys Pro Asn Arg Met Val Val Val Ala
85          90          95
Asn Cys Val Glu Ala Phe Val Arg Glu Phe Phe Asp Gln Asn Pro Leu
100        105        110
Ser Gln Leu Gly Ile Val Ile Ile Lys Asn Gly Val Ala His
115        120        125

```

<210> 1085
 <211> 139
 <212> PRT
 <213> Pinus radiata

<400> 1085
 Arg Ala Pro Cys Cys Glu Lys Thr His Thr Asn Lys Gly Ala Trp Ser
 1 5 10 15
 Lys Asp Glu Asp Glu Ala Leu Val Ala Tyr Ile Gln Ala His Gly Glu
 20 25 30
 Gly Ser Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Gln Arg Cys Gly
 35 40 45
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys
 50 55 60
 Arg Gly Asn Phe Ser Pro Glu Glu Asp Glu Ile Ile Ile Lys Leu His
 65 70 75 80
 Ser Met Leu Gly Asn Lys Trp Ser Leu Ile Ala Ser Lys Leu Pro Gly
 85 90 95
 Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile Lys Arg
 100 105 110
 Lys Met Leu Glu Arg Gly Leu Asp Pro Ser Thr His Leu Pro Leu Met
 115 120 125
 Ser Asp His Gly Ser Phe Glu Ser Ser Ser Lys
 130 135

<210> 1086
 <211> 189
 <212> PRT
 <213> Pinus radiata

<400> 1086
 Lys Val Val Pro Pro Leu Asp Phe Thr Gln Gln Pro Pro Ala Gln Glu
 1 5 10 15
 Leu Thr Ala Arg Asp Leu His Asp Asn Glu Trp Lys Phe Arg His Ile
 20 25 30
 Phe Arg Gly Gln Pro Lys Arg His Leu Leu Thr Thr Gly Trp Ser Val
 35 40 45
 Phe Val Ser Ala Lys Arg Leu Ala Ala Gly Asp Ser Val Leu Phe Ile
 50 55 60
 Trp Asn Glu Lys Gly Gln Leu Leu Leu Gly Ile Arg Arg Ala Asn Arg
 65 70 75 80
 Pro Gln Ala Val Met Pro Ser Leu Val Leu Ser Ser Asp Ser Met His
 85 90 95
 Ile Gly Leu Leu Ala Ala Ala Ala His Ala Ala Ala Thr Asn Ser Arg
 100 105 110
 Phe Thr Ile Phe Tyr Asn Pro Arg Ala Ser Pro Ser Glu Phe Val Ile
 115 120 125
 Pro Leu Ala Lys Tyr Val Lys Ala Val Tyr His Thr Arg Val Ser Ile
 130 135 140
 Gly Met Arg Phe Arg Met Leu Phe Glu Thr Glu Glu Ser Ser Val Arg
 145 150 155 160
 Arg Tyr Met Gly Thr Ile Thr Gly Ile Ser Asp Leu Asp Gln Val Arg
 165 170 175
 Trp Pro Asn Ser His Trp Arg Ser Val Lys Val Gly Trp
 180 185

<210> 1087
 <211> 132
 <212> PRT
 <213> Pinus radiata

<400> 1087
 Trp Glu Phe Ala Asn Asp Cys Phe Arg Lys Gly Glu Lys Gln Leu Leu
 1 5 10 15
 Cys Glu Ile His Arg Arg Lys Ser Val Gln Gln Ser Ser Ala Ala Pro
 20 25 30

Ala Ser Arg Cys Val Ser Pro Val Asn Ser Val Glu Glu Gln Ala Leu
 35 40 45
 Ser Ser Thr Ser Ser Pro Val Ser Ser His Ala Glu Ala Ala Leu Val
 50 55 60
 Asn Cys Gly Gln Asn Ser Thr Ser Gly Leu His Gly Glu Asn Glu Lys
 65 70 75 80
 Leu Arg Lys Asp Asn Leu Leu Met Ser Glu Leu Ala Gln Met Lys
 85 90 95
 Lys Gln Cys Asn Asp Leu Leu Leu Phe Leu Ser Lys Cys Val Asn Ile
 100 105 110
 Thr Pro Asp Asn Leu Ser Asn Ile Leu Ile Ala Ala Ser Gln Thr Asn
 115 120 125
 Cys Arg Asp Glu
 130

<210> 1088

<211> 214

<212> PRT

<213> Pinus radiata

<400> 1088

Gly Lys Trp Gly Val Pro Asp Asn Leu Tyr Gly Ala Gln Glu Asp Ser
 1 5 10 15
 Gly Gly Ser Ser Val Lys Gln Lys Asn Leu Lys Asp Gly Asp Gln Phe
 20 25 30
 Thr Ser Ser Asp Glu Ala Asp Ser Glu Val Asn Glu Phe Asn Ile Met
 35 40 45
 Lys Arg Ser Asn Ser Gly Val Gly Tyr Glu Asp Asn Lys Arg Ser Gly
 50 55 60
 Gly Gln Gly Asp Gly Asn Gln Tyr Arg Ser Arg His Ser Arg Ser Ile
 65 70 75 80
 Ser Met Asp Ser Ile Met Ser Lys Met His Asn Phe Ser Glu Asp Leu
 85 90 95
 Glu Gln Glu Pro Ser Gln Gly Arg Asn Val Arg His Ser His Ser Asn
 100 105 110
 Ser Met Asp Gly Ser Thr Asn Phe Asn Val Glu Phe Gly Asn Gly Glu
 115 120 125
 Phe Ser Ala Ser Glu Met Lys Lys Ile Met Ala Ser Glu Lys Leu Ala
 130 135 140
 Glu Leu Ala Thr Val Asp Pro Lys Arg Val Lys Arg Ile Leu Ala Asn
 145 150 155 160
 Arg Gln Ser Ala Ala Arg Ser Lys Glu Arg Lys Met Arg Tyr Ile Ser
 165 170 175
 Glu Leu Glu Arg Lys Val Gln Thr Leu Gln Thr Glu Ala Thr Thr Leu
 180 185 190
 Ser Ala Gln Leu Thr Leu Leu Gln Arg Asp Gln Leu Asp Trp Ala Val
 195 200 205
 Arg Thr Thr Ser Ser Ser
 210

<210> 1089

<211> 97

<212> PRT

<213> Pinus radiata

<400> 1089

Met Ala Asp Gly His Gln Phe Asn Asn Ile Leu Leu Val Gly Arg Gly
 1 5 10 15
 Gly Thr Asn Pro Gly Gln Leu Arg Ile His Ser Gly Gly Ile Val Trp
 20 25 30
 Arg Arg Gln Gly Gly Lys Val Val Asp Val Ala Lys Asn Glu Val

```

      35              40              45
Lys Ser Leu Ser Trp Thr Arg Val Pro Arg Gly Tyr Gln Leu Gly Val
  50              55              60
Lys Leu Lys Ala Gly Leu Asn Ile Lys Leu Ala Gly Phe Arg Glu Gln
  65              70              75              80
Asp Val Gly Asn Leu Thr Asn Phe Met Thr Asn Thr Ile Gly Leu Ala
      85              90              95
Pro

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<210> 1090
<211> 108
<212> PRT
<213> Pinus radiata

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<400> 1090
Met Gly Asp His Ser Gly Gly Glu Ser Ser Pro His Ser Asp Ile Glu
  1              5              10              15
Ser Thr Gly Ile His Asn Asn Gly Ser Ser Ser Ser Gln Ser Ile
      20              25              30
Ile Arg Glu Gln Asp Arg Leu Leu Pro Ile Ala Asn Val Gly Arg Ile
      35              40              45
Met Lys Lys Thr Leu Pro Thr Asn Ala Lys Ile Ser Lys Glu Ala Lys
  50              55              60
Glu Ile Met Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Val Thr Gly
  65              70              75              80
Glu Ala Ser Asp Lys Cys His Lys Glu Lys Arg Lys Thr Ile Asn Gly
      85              90              95
Asp Asp Ile Leu Trp Ala Met Thr Thr Leu Gly Phe
      100              105

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<210> 1091
<211> 90
<212> PRT
<213> Pinus radiata

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<400> 1091
Arg Asn Ile Gln Arg Asn Glu Tyr His Asn Leu Phe Asn Phe Ile Ser
  1              5              10              15
Ser Lys Gly Leu Lys Ile Met Asn Leu Gly Asp Ala His Gly Thr Ser
      20              25              30
Gly Val Ala Ala Val Leu Glu Asn Ser Asp Asp Glu Ala Val Asp Pro
      35              40              45
His Leu Glu Arg Ile Lys Ser Ala Arg Glu Gly Gly Ala Gly Glu Asp
  50              55              60
Ser Asp Glu Glu Ala Cys Tyr Thr Gly Asp Leu Ser Leu Ile Cys Ala
  65              70              75              80
Val Val Lys Glu Leu Ile Cys Thr His Asp
      85              90

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<210> 1092
<211> 133
<212> PRT
<213> Pinus radiata

```

```

<400> 1092
Met Gly Cys Val Ser Ser Lys Val Glu Asn Glu Glu Leu Val Lys Arg
  1              5              10              15
Cys Arg Asp Arg Arg Arg Leu Met Lys Gln Ala Val Asn Ser Arg His
      20              25              30
Asn Phe Ala Ala Ala His Ile Ala Tyr Leu Arg Ala Leu Gln Asn Thr

```

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      35              40              45
Gly Asn Ala Leu Val Gln Phe Ala Glu Gly Glu Ser Ser Ala Met Asn
 50              55              60
Gly Asn Ala Ile Glu Glu Ala Ala Thr Pro Met Pro Ala Thr Pro Leu
 65              70              75              80
Thr Ala Ser His Arg His Pro Met Lys Phe His Pro Pro Pro Pro Pro
      85              90              95
Pro Pro Pro Pro Leu Val Pro Ser Ser Pro Ser Val Ser Pro Ser Met
      100              105              110
Glu Ser Phe Arg Met Pro Ser Lys His Asn Pro Leu Ser Arg Ser Thr
      115              120              125
Ser Asp Ile Ser Tyr
130

```

<210> 1093
 <211> 148
 <212> PRT
 <213> Pinus radiata

```

      <400> 1093
Met Gly Arg Ala Pro Cys Cys Thr Lys Val Gly Leu Asn Lys Gly Ala
 1              5              10              15
Trp Ser Ala Glu Glu Asp Ser Leu Leu Gly Arg Tyr Ile Gln Thr His
      20              25              30
Gly Glu Gly Asn Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Arg Arg
      35              40              45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Cys
      50              55              60
Ile Lys Arg Gly Asn Ile Thr Thr Asp Glu Glu Glu Leu Ile Ile Arg
 65              70              75              80
Met His Ala Leu Leu Gly Asn Arg Trp Ser Ile Ile Ala Gly Arg Val
      85              90              95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr Asn Leu
      100              105              110
Ser Lys Lys Leu Ala Val Arg Gly Ile Asp Pro Lys Thr His Lys Lys
      115              120              125
Ile Thr Thr Asp Gly Thr Asn Arg Val Asn Gly Asp Arg Phe Ser Gln
      130              135              140
Arg Lys Gly Glu
145

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<210> 1094
 <211> 107
 <212> PRT
 <213> Pinus radiata

```

      <400> 1094
Arg Gln Leu Ile Arg Glu Leu Glu Gln Met Phe Asn Ile Glu Gly Glu
 1              5              10              15
Leu Glu Asp Pro Ser Lys Gly Trp Gln Val Val Tyr Thr Asp Asn Glu
      20              25              30
Gly Asp Met Met Leu Val Gly Asp Asp Pro Trp Gln Glu Phe Cys Ser
      35              40              45
Ile Val Arg Lys Ile Tyr Ile Tyr Thr Arg Glu Glu Val Glu Lys Met
      50              55              60
Thr Pro Gln Thr Pro Ser Ala Asn Ser Arg Asp Val Gln Lys Ser Leu
 65              70              75              80
Ser Gln Glu Glu Thr Ser Arg Ser Ser Asp Arg Gln Asp Ser Ser Ile
      85              90              95
Ala Gly Val Thr Ala Glu Arg Ser Ser Asp Ala
      100              105

```

<210> 1095
 <211> 275
 <212> PRT
 <213> Pinus radiata

<400> 1095
 Met Ser Asn Gly Arg Leu Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro
 1 5 10 15
 Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr
 20 25 30
 Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser
 35 40 45
 Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val
 50 55 60
 Glu His Arg Pro Phe Thr Pro Ser Glu Asp Ala Ala Ile Leu Gln Ala
 65 70 75 80
 His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg Ala Leu Pro
 85 90 95
 Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu Arg
 100 105 110
 Arg Arg Cys Arg Asp Pro Lys Lys Gly Ile Val Val His Leu Asp Asp
 115 120 125
 Glu Ile Ser Ser Leu Asp Ala Ala Arg Lys Arg Ser Ser Asp Gly Phe
 130 135 140
 Ser His Asp Gly Ser Ser Ala Leu Glu Asp Asn Gly Cys Ser Ser Trp
 145 150 155 160
 Glu Val Asp Ser Lys Arg Leu Lys Arg Leu Gly Glu Leu Gly Thr Glu
 165 170 175
 Gln Gly Pro Glu Val Glu Ala Glu Val Glu Val Ser Asp Arg Ser Asp
 180 185 190
 Ala Asn Pro Gly Arg Val Leu Tyr Arg Pro Val Pro Val Val Ser Phe
 195 200 205
 Phe Ser Ser Phe Gly Lys Thr Val Ala Asn Leu Gln Glu Thr Ala Ala
 210 215 220
 Gly Ala Val Gly Val Asp Pro Pro Thr Ser Leu Ser Leu Ser Leu Pro
 225 230 235 240
 Gly Leu Asp Pro Ala Ile Pro Ser Pro Lys Leu Ser Thr Gln Lys Asp
 245 250 255
 Ser His Asn Asn Ser Thr Val Asn Asn Asn Ile Pro Ile Pro Pro Val
 260 265 270
 Val Asn Thr
 275

<210> 1096
 <211> 128
 <212> PRT
 <213> Pinus radiata

<400> 1096
 Glu Phe Gly Arg Ser Ser Glu Lys Gly Arg Gly Tyr Gly Arg Gly Arg
 1 5 10 15
 Gly Arg Gly Gly Arg Gly Gly Tyr Gly Asn Asp Ala Gly Asp Glu Ser
 20 25 30
 Gln Arg Pro Arg Arg Gln Tyr Glu Arg Arg Ser Gly Thr Gly Arg Gly
 35 40 45
 Tyr Glu Val Lys Arg Glu Gly Ala Gly Gln Gly Asn Trp Gly Thr Pro
 50 55 60
 Thr Asp Gln Gly Phe Thr Glu Glu Pro Glu Glu Leu Ser Arg Ala Glu
 65 70 75 80
 Glu Glu Lys Thr Val Thr Pro Glu Lys Gln Glu Glu Gln Lys Pro Ser

```

      85              90              95
Glu Glu Ser Asn Gln Glu Ile Pro Ala Pro Glu Ser Glu Glu Lys Lys
      100          105          110
Glu Glu Glu Glu Asp Lys Asp Met Thr Leu Asp Glu Tyr Glu Lys Val
      115          120          125

```

<210> 1097
 <211> 135
 <212> PRT
 <213> Pinus radiata

```

      <400> 1097
Ala Val Asn Ser Ser Leu Ser Val Gly Met Arg Phe Lys Met Arg Phe
  1              5              10              15
Glu Gly Glu Glu Ser Pro Glu Arg Arg Phe Thr Gly Thr Ile Ile Gly
      20          25          30
Met Gly Glu Val Asp Asn Val Arg Trp Pro Glu Ser Lys Trp Arg Ser
      35          40          45
Leu Lys Val Gln Trp Asp Glu Thr Ser Val Val Pro Arg Pro Glu Arg
      50          55          60
Val Ser Pro Trp Glu Ile Glu Thr Phe Val Ala Ser Ser Ala Ala Leu
      65          70          75          80
Asn Pro Leu Pro Ala Pro Arg Thr Lys Lys Pro Arg Pro Asn Leu Val
      85          90          95
Ser Ser Ser Gln Glu Leu Met Ile His Gly Ser Gly Lys Thr Ala Thr
      100          105          110
Asp Ser Ser Gln Val His Arg Leu Pro Arg Val Leu Gln Gly Gln Glu
      115          120          125
Met Arg Thr Phe Gly Gly Ser
      130          135

```

<210> 1098
 <211> 46
 <212> PRT
 <213> Pinus radiata

```

      <400> 1098
Ala Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp Ile
  1              5              10              15
Lys Arg Gly Asn Ile Ser Pro Glu Glu Glu Leu Ile Ile Arg Leu
      20          25          30
His Arg Leu Leu Gly Asn Arg Tyr Val Glu Asn Arg Gly Thr
      35          40          45

```

<210> 1099
 <211> 113
 <212> PRT
 <213> Pinus radiata

```

      <400> 1099
Met Gly Arg Ser Pro Cys Cys Ser Lys Glu Gly Leu Asn Arg Gly Ala
  1              5              10              15
Trp Thr Lys Arg Glu Asp Met Ile Leu Ser Glu Tyr Val Arg Ile His
      20          25          30
Gly Asp Gly Gly Trp Arg Asn Leu Pro Glu Lys Ala Gly Leu Lys Arg
      35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp
      50          55          60
Ile Lys Arg Gly Asn Ile Cys Pro Ala Glu Glu Glu Leu Ile Ile Arg
      65          70          75          80
Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu

```



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65              70              75              80
Glu His Gln Phe Arg Asn Ile Gln Arg Asn Glu Tyr His Asn Leu Phe
      85          90          95
Ser Phe Ile Asn Thr Lys Gly Leu Lys Ile Ile Asn Leu Gly Ala Thr
      100        105        110
Glu Thr Ile Gly Gly Val Ala Ala Ala Leu Gln Asn Ser Asp Asp Glu
      115        120        125
Ala Val Asp Pro His Leu Glu Arg Ile Lys Ile Tyr Val Met Val Glu
      130        135        140
Leu Val Leu Lys Thr Ala Thr Lys Arg Met Lys Thr Leu Leu Gln Lys
145      150      155      160
Thr Met Met Leu Asp Leu Gln Gln Met Ser Gln Lys Lys Arg Asp Gln
      165      170      175
Met Gln Val Arg Val Gln Arg Ser Ser Asn Leu Gln Arg Lys Lys
      180      185      190

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<210> 1103
<211> 106
<212> PRT
<213> Pinus radiata

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<400> 1103
Met Ser Pro Pro 5 Ser Tyr Ser Met Phe Pro Asn Ser Gly Met Gly
1      10      15
Leu Asn Pro Ser Val Thr Ser Ser Glu Pro Ser Ser Gln Val Ser Gly
      20      25      30
Ser Ile Pro His Gln Tyr Ser Gly Ser Glu Glu Asp Pro Lys Leu Thr
      35      40      45
Ile Asp Glu Arg Lys Gln Lys Arg Met Leu Ser Asn Arg Glu Ser Ala
50      55      60
Arg Arg Ser Arg Met Arg Lys Gln Gln His Leu Asp Glu Leu Arg Ala
65      70      75      80
Arg Thr Ala His Leu Arg Ala Glu Asn Ser His Met Leu Thr Lys Phe
      85      90      95
Asn Ile Ala Ser Gln Lys Tyr Met Gln Leu
      100      105

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<210> 1104
<211> 162
<212> PRT
<213> Pinus radiata

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<400> 1104
Arg Gly Gln Pro Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe
1      5      10      15
Val Ser Ala Lys Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg
      20      25      30
Gly Glu Asn Ser Glu Leu Arg Val Gly Val Arg Arg Val Met Arg Gln
      35      40      45
Gln Ser Asn Met Pro Ser Ser Val Ile Ser Ser His Ser Met His Leu
50      55      60
Gly Val Ile Ala Thr Ala Ser His Ala Val Thr Thr Arg Thr Met Phe
65      70      75      80
Thr Val Tyr Tyr Lys Pro Arg Thr Ser Gln Ser Glu Phe Ile Ile Pro
      85      90      95
Tyr Asp Lys Tyr Met Glu Ala Val Asn Ser Asn Leu Ser Val Gly Met
      100      105      110
Arg Phe Lys Met Arg Phe Glu Gly Glu Glu Ala Pro Glu Arg Arg Phe
      115      120      125
Thr Gly Thr Ile Ile Gly Ile Gly Asp Val Asp Pro Ser Arg Trp Pro
      130      135      140

```

Ser Ser Lys Trp Arg Ser Leu Lys Val Gln Trp Asp Glu Thr Cys Ala
 145 150 155 160
 Ile Pro

<210> 1105
 <211> 115
 <212> PRT
 <213> Pinus radiata

<400> 1105
 Met Ala Gln Ser Glu Glu Gln Pro Asn Glu Ala Thr Val Pro Arg Pro
 1 5 10 15
 Ala Asp Ser His Arg Ser Ile Pro Thr Pro Phe Leu Met Lys Thr Tyr
 20 25 30
 Arg Leu Val Asp Asp Pro Ser Leu Asn Asp Ile Ile Ser Trp Asn Glu
 35 40 45
 Asp Gly Thr Thr Phe Ile Val Trp Arg Pro Ala Glu Phe Ala Arg Asp
 50 55 60
 Leu Leu Pro Asn Tyr Phe Lys His Asn Asn Phe Ser Ser Phe Val Arg
 65 70 75 80
 Gln Leu Asn Thr Tyr Gly Phe Arg Lys Ile Val Pro Asp Arg Trp Glu
 85 90 95
 Phe Ala Asn Glu Phe Phe Arg Arg Gly Glu Lys Lys Leu Leu Cys Glu
 100 105 110
 Ile His Arg
 115

<210> 1106
 <211> 37
 <212> PRT
 <213> Pinus radiata

<400> 1106
 Met Gly Arg Ala Pro Cys Cys Thr Lys Val Gly Leu Asn Lys Gly Ala
 1 5 10 15
 Trp Ser Ala Glu Glu Asp Ser Leu Leu Gly Arg Tyr Ile Gln Thr His
 20 25 30
 Gly Glu Gly Asn Trp
 35

<210> 1107
 <211> 187
 <212> PRT
 <213> Pinus radiata

<400> 1107
 Thr Arg Ser Gly Ser Lys Asn Ser Ala Arg Ala Pro Val Ser Gly Phe
 1 5 10 15
 Ser Met Asn Ser Asn Met Gly Val Ser Gly Gly Leu Asp Glu Ser Gly
 20 25 30
 Phe Ser Gln Pro Pro Pro Asn Phe Ala Lys Met Asn Ala Pro Thr Arg
 35 40 45
 Thr Phe Thr Lys Val Tyr Lys Leu Gly Ser Val Gly Arg Ser Val Asp
 50 55 60
 Val Thr Arg Phe Arg Gly Tyr Pro Asp Leu Arg Ala Glu Leu Asp Arg
 65 70 75 80
 Met Phe Gly Leu Glu Gly Gln Leu Glu Asn Pro Arg Ser Ser Trp Gln
 85 90 95
 Leu Val Phe Val Asp Lys Glu Lys Asp Val Leu Leu Leu Gly Asp Asp
 100 105 110

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Pro Trp Glu Glu Phe Val Asn Asn Val Arg Phe Ile Lys Ile Leu Ser
      115      120
Pro Pro Glu Val Gln Gln Met Ser Gln Glu Asp Met Glu Phe Trp Ser
      130      135      140
Ser Ile Pro Thr Gln Gln Gln Thr Ser Ser Ser Ser Asp Asp Cys Val
      145      150      155      160
Ala Arg Asn Ser Ser Arg Asn Ile Arg Ser Val Leu Thr Ser Pro Gly
      165      170      175
Ser Leu Asp Val Leu Ser Val Asp Pro Ile Val
      180      185

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<210> 1108
<211> 130
<212> PRT
<213> Pinus radiata

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<400> 1108
His Asp Asn Glu Trp Lys Phe Arg His Ile Tyr Arg Gly Gln Pro Lys
 1      5      10      15
Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe Val Ser Ala Lys Arg
      20      25      30
Leu Ser Ala Gly Asp Ala Val Leu Phe Ile Arg Asn Glu Lys Gly Gln
      35      40      45
Leu Leu Leu Gly Ile Arg Arg Ala Asn Arg Ser Gln Thr Val Met Pro
      50      55      60
Ser Ser Val Leu Ser Ser Asp Ser Met His Ile Gly Val Leu Ala Ala
      65      70      75      80
Ala Ala His Ala Ala Ser Thr Asn Cys Arg Phe Thr Ile Phe Tyr Asn
      85      90      95
Pro Arg Ala Ser Pro Ser Glu Phe Val Ile Pro Leu Ser Lys Tyr Glu
      100      105      110
Lys Ala Val Tyr His Thr Arg Val Ser Ile Gly Met Arg Phe Arg Met
      115      120      125
Leu Phe
130

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<210> 1109
<211> 81
<212> PRT
<213> Pinus radiata

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<400> 1109
Met Gly Arg Thr Pro Cys Cys Glu Lys Gly His Thr Asn Lys Gly Ala
 1      5      10      15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
      20      25      30
Gly Glu Gly Arg Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
      35      40      45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro His
      50      55      60
Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Phe Ile Ile Lys
      65      70      75      80
Leu

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<210> 1110
<211> 146
<212> PRT
<213> Pinus radiata

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<400> 1110

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Met Gly Arg Ala Pro Cys Trp Asp Lys Met Gly Val Lys Lys Gly Ala
 1      5      10
Trp Thr Leu Asp Glu Asp Lys Ile Leu Val Asp Tyr Ile Thr Lys His
 20      25      30
Gly His Gly Asn Trp Arg Ala Leu Pro Lys Gln Ala Gly Leu Leu Arg
 35      40      45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Lys Pro Asp
 50      55      60
Ile Lys Arg Gly Asn Phe Ser Pro Glu Glu Glu Asp Gln Ile Ile Lys
 65      70      75      80
Leu His Glu Leu Ile Gly Asn Arg Trp Ser Thr Ile Ala Ser Tyr Leu
 85      90      95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Val Trp Asn Thr His Leu
100      105      110
Lys Lys Arg Leu Ala Arg Met Lys Ala Asp Ser Val Ala Val Asp Ala
115      120      125
Gln Pro Thr Pro Ala Ser Ser Leu Ala Ser Ser Thr Thr Glu Met Thr
130      135      140
Cys His
145

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<210> 1111
<211> 72
<212> PRT
<213> Pinus radiata

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<400> 1111
Cys Ile Glu Ala Asn Gly Gly Gly Ala Pro Gly Arg Ser Leu Pro Lys
 1      5      10      15
Ala Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile
 20      25      30
Asn Tyr Leu Arg Pro Asp Asp Val Lys Arg Gly Asn Phe Thr Glu Glu
 35      40      45
Glu Asp Asp Leu Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp
 50      55      60
Ser Leu Ile Ala Gly Arg Leu Pro
 65      70

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<210> 1112
<211> 112
<212> PRT
<213> Pinus radiata

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<400> 1112
Met Arg Arg Leu Arg Cys Glu Lys Gly Asn Thr Asn Lys Gly Ala Trp
 1      5      10      15
Thr Gln Gln Glu Asp Ala Arg Leu Ile Ala Tyr Ile Arg Ala His Gly
 20      25      30
Glu Gly Gly Trp His Ser Leu Pro Arg Ala Ala Gly Leu Leu Arg Cys
 35      40      45
Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asn Leu
 50      55      60
Lys Arg Gly Asn Phe Ser Glu Glu Asp Asp Leu Ile Ile Lys Leu
 65      70      75      80
His Asn Leu Leu Gly Asp Lys Trp Ser Leu Ile Ala Gly Arg Leu Pro
 85      90      95
Gly Arg Met Glu Asp Gln Ile Lys Asn Tyr Trp Asp Thr His Phe Lys
100      105      110

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<210> 1113
<211> 148

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<212> PRT

<213> Pinus radiata

<400> 1113

Gly Lys Glu Val His Ile Ala Glu Pro Asp Gln Val Ser Asp Pro Pro
 1 5 10 15
 Lys Ala Ile Lys Tyr Glu Pro Pro Ala Val Ser Cys Asp Gln Glu Lys
 20 25 30
 Pro Leu Gln Lys Leu Ser Lys Glu Thr Gln Val Lys Gln His Gly Asn
 35 40 45
 Pro Thr Arg Ser Cys Thr Lys Val His Lys Gln Gly Ile Ala Leu Gly
 50 55 60
 Arg Ala Val Asp Leu Thr Lys Phe Glu Gly Tyr Glu Leu Ile Cys
 65 70 75 80
 Glu Leu Glu Arg Met Phe Asn Ile Glu Gly Glu Leu Arg Asn Pro Ser
 85 90 95
 Lys Gly Trp Gln Val Val Tyr Thr Asp Asn Glu Gly Asp Met Met Leu
 100 105 110
 Val Gly Asp Asp Pro Trp Gln Glu Phe Cys Ser Ile Val Arg Lys Ile
 115 120 125
 Phe Ile Tyr Thr Arg Glu Glu Val Glu Lys Met Thr Pro Gln Lys His
 130 135 140
 Ala Lys Leu Gln
 145

<210> 1114

<211> 273

<212> PRT

<213> Pinus radiata

<400> 1114

Glu Thr Gln Ser Ser Asp Asn Asn Tyr Met Val Gly Phe Val Leu Ala
 1 5 10 15
 Asn Val Val Gly Leu Gln Tyr Tyr Thr Gly Thr Ile Asn Gly Arg Glu
 20 25 30
 Met Ile Arg Leu Val Arg Glu Pro Glu Asn Arg Tyr Asp Pro Asn Ala
 35 40 45
 Ile Lys Val Leu Asn Met Ser Gly Gln Gln Val Gly His Ile Glu Arg
 50 55 60
 Ala Val Ala Leu Ala Leu Ala Ser His Val Asp Gln Ser Leu Ile Leu
 65 70 75 80
 Ile Glu Gly Ile Val Ser Arg Ala Leu His Lys Gly Ala Tyr Lys Leu
 85 90 95
 Pro Cys Gln Ile Tyr Ile Phe Ser His Arg Asp Ser Met Gly Met Val
 100 105 110
 Leu Gln Leu Lys Gly Ala Gly Leu Asn Val Ile Thr Ala Glu Asp
 115 120 125
 Gln Glu Phe Leu Thr Ala Glu Ser Ile Ala Ala Lys Glu Ile Tyr Glu
 130 135 140
 Asp Pro Gly Val Lys Glu Val Arg Arg Val Asp Asp Ile Phe Gly Ser
 145 150 155 160
 Leu Asn Asn Pro Lys Lys Arg Gln Ser Met Glu Ala Cys Glu Leu Val
 165 170 175
 Thr Ser Thr Leu Leu Gln His Gln Lys Glu Ala Leu Ala Trp Met Val
 180 185 190
 Gln Arg Glu Asn Ser Ser Glu Leu Pro Pro Phe Trp Asp Val Cys Asp
 195 200 205
 Lys Thr Ser Lys Ser Gln Gln Leu Arg Tyr Lys Asn Val Leu Thr Asn
 210 215 220
 Phe Glu Thr Asn Gly Arg Pro Lys Pro Leu Arg Gly Gly Ile Leu Ala
 225 230 235 240

Asp Asp Met Gly Leu Gly Lys Thr Leu Ser Leu Leu Ser Leu Ile Ala
 245 255
 Thr Asn Arg Pro Gly Ala Lys Leu Pro Pro Val Val Asp Ile Ala Pro
 260 265 270
 Ser

<210> 1115
 <211> 129
 <212> PRT
 <213> Pinus radiata

<400> 1115
 Leu Ile Pro Gln His Asn Ala Phe Ser Leu Glu Leu Arg Phe Ser Asp
 1 5 10 15
 Arg Gln Leu Pro Ser Ser Thr Pro Pro Asn Cys Asp Ser Met Phe Pro
 20 25 30
 Ser His Tyr Thr Ala Leu Ala Leu Arg Arg Gln Met Trp Arg Asn Pro
 35 40 45
 Arg Glu Ser Gly Gln Ser His Ser Gln Pro Pro Glu Lys Asp Arg Gly
 50 55 60
 Lys Thr Phe Gly Gln Phe Lys Gly Ile Arg Met Arg Lys Trp Gly Lys
 65 70 75 80
 Trp Val Ser Glu Ile Arg Met Pro Arg Ser Lys Glu Arg Ile Trp Leu
 85 90 95
 Gly Ser Tyr Lys Thr Val Glu Gln Ala Ala Arg Ala Tyr Asp Ala Ala
 100 105 110
 Leu Tyr Cys Lys Arg Gly Pro Asn Ala Lys Phe Asn Phe Pro Asn Ser
 115 120 125
 Val

<210> 1116
 <211> 90
 <212> PRT
 <213> Pinus radiata

<400> 1116
 Met Asp Arg Glu Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1 5 10 15
 Gly Lys Gly Thr Met Arg Arg Lys Lys Thr Ile His Lys Thr Ala
 20 25 30
 Thr Ala Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val
 35 40 45
 Asn Asn Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp His
 50 55 60
 Val Ile His Phe Ala Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn
 65 70 75 80
 Thr Trp Val Gly Ser Gly His Arg Lys Gln
 85 90

<210> 1117
 <211> 33
 <212> PRT
 <213> Pinus radiata

<400> 1117
 Gly Lys Thr Gln Met Lys Leu Lys Arg Glu Arg Asp Gln Gln Ala Arg
 1 5 10 15
 Asp Ala Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu
 20 25 30

Ser

<210> 1118
 <211> 107
 <212> PRT
 <213> Pinus radiata

<400> 1118
 Met Gly Arg Ala Pro Cys Cys Ala Asn Gly Asp Arg Ser Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Thr Gln Tyr Ile Gln Ala His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Gly Phe Ser Glu Asp Glu Asp Leu Ile Leu Lys
 65 70 75 80
 Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Gly His Gln Asn Gln Asn Tyr
 100 105

<210> 1119
 <211> 112
 <212> PRT
 <213> Pinus radiata

<400> 1119
 Arg Lys Ser Asn Val His Ser Phe Cys Lys Thr Leu Thr Ala Ser Asp
 1 5 10 15
 Thr Ser Thr His Gly Gly Phe Ser Val Leu Arg Arg His Ala Asp Glu
 20 25 30
 Cys Leu Pro Pro Leu Asp Met Ser Gln Gln Pro Pro Ser Gln Glu Leu
 35 40 45
 Val Ala Arg Asp Leu His Gly Met Glu Trp Arg Phe Arg His Ile Phe
 50 55 60
 Arg Gly Gln Pro Arg Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe
 65 70 75 80
 Val Ser Ser Lys Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg
 85 90 95
 Gly Glu Ser Gly Glu Leu Arg Val Gly Val Arg Arg Ala Met Arg Gln
 100 105 110

<210> 1120
 <211> 156
 <212> PRT
 <213> Pinus radiata

<400> 1120
 Ala Leu Arg Glu Ala Ile Lys Asn Gly Ala Cys Pro Asn Cys Gly Gly
 1 5 10 15
 Ser Thr Ser Leu Gly Glu Met Pro Gly Phe Asp Glu His His Phe Arg
 20 25 30
 Ile Glu Asn Thr Arg Leu Lys Glu Glu Leu Asp Arg Val Ser Gly Ile
 35 40 45
 Ala Thr Lys Tyr Ile Gly Arg Ser Met Pro His Leu Ala Pro Ile Ala
 50 55 60
 Thr Pro Pro Met Leu Met Ser Ser Leu Glu Leu Ala Met Gly Ser Phe
 65 70 75 80

Gly	Gly	Lys	Gln	Ser	Gln	Pro	Ala	Ala	Pro	Ser	Val	Asp	Phe	Ile	Ser
				85					90					95	
Gly	Pro	Leu	Ala	Asp	Gly	Pro	Ile	Ile	Asn	Cys	Gly	Thr	Leu	Thr	Asp
			100					105					110		
Leu	Asp	Lys	Pro	Leu	Ala	Leu	Glu	Leu	Ala	Met	Asn	Gly	Val	Glu	Glu
		115				120						125			
Leu	Ile	Arg	Met	Ala	Gln	Thr	Asp	Glu	Pro	Leu	Trp	Leu	Lys	Asp	Val
	130					135					140				
Asn	Ala	Gly	Ser	Val	Lys	Glu	Leu	Phe	Glu	Leu	Gly				
145					150					155					

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<210> 1121
<211> 116
<212> PRT
<213> Pinus radiata
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[illegible]

<210> 1122
<211> 104
<212> PRT
<213> Pinus radiata

[illegible]

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<210> 1123
<211> 169
<212> PRT
<213> Pinus radiata
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<400> 1123


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Glu Glu Lys Gln Leu Ser Ile Ser Gly Arg Asn Trp Gly Glu Val Asn
 1          5          10
Leu Glu Gly Asn Met Leu Thr Phe Leu Val Gly Ser Lys Pro Ala Phe
          20          25          30
Glu Val Ser Leu Ala Asp Val Ser Gln Thr Gln Leu Gln Gly Lys Asn
          35          40          45
Asp Val Val Leu Glu Phe His Val Asp Asp Thr Thr Gly Ala Asn Glu
          50          55          60
Lys Asp Ser Leu Met Glu Leu Ser Phe His Ile Pro Asn Ser Asn Thr
          65          70          75          80
Thr Phe Ala Gly Asp Glu Ala Ser Pro Pro Ala Gln Ile Phe Arg Glu
          85          90          95
Lys Ile Met Ser Met Ala Asp Val Gly Ser Ser Gly Gly Glu Ala Val
          100          105          110
Ala Leu Phe Glu Asp Ile Ala Ile Leu Thr Pro Arg Gly Arg Tyr Thr
          115          120          125
Ile Glu Leu His Leu Ser Phe Met Arg Leu Gln Gly Gln Ala Ser Asp
          130          135          140
Phe Lys Ile Gln Tyr Ser Ser Val Leu Arg Leu Phe Val Leu Pro Lys
          145          150          155          160
Ser Pro His Thr Leu Val Val Ile Thr
          165

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<210> 1124
<211> 124
<212> PRT
<213> Pinus radiata

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<400> 1124
Leu Gly His Ser Gln Asn Phe Ser Thr Asp Val Asn Arg Met Pro Asp
 1          5          10          15
Val Pro Pro Arg Arg Gly Gly His Arg Arg Ala Gln Ser Glu Ile Ala
          20          25          30
Phe Arg Leu Pro Asp Asp Ile Met Phe Asp Gly Asp Leu Gly Phe Ala
          35          40          45
Gly Phe Asp Met Pro Thr Val Ser Asp Asp Ala Thr Glu Ala Glu Asp
          50          55          60
Leu Ile Ser Met Tyr Met Asp Met Glu Lys Leu Thr Ser Phe Gly Glu
          65          70          75          80
Pro Leu Asn Ser Ala Ala Gly Glu Gly Ser Lys Leu Pro Ser Gly Ala
          85          90          95
Glu Thr Asn Arg Pro Pro His His Ser Arg Ser Leu Ser Val Asp Ala
          100          105          110
Val Phe Ser Gly Phe Glu Gly Asn Met Glu Asp Thr
          115          120

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<210> 1125
<211> 70
<212> PRT
<213> Pinus radiata

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<400> 1125
Met Asp Arg Ser Ser Ser Glu Asp Ser Val Asp Ser Gln Gly Asp Val
 1          5          10          15
Asn Ala Asn Tyr Lys Met Val Phe Ser Glu Asp Glu Lys Asp Leu Ile
          20          25          30
Ser Arg Leu Tyr Asn Leu Leu Gly Gln Arg Trp Ala Leu Ile Ala Gly
          35          40          45
Arg Ile Pro Gly Arg Thr Ala Glu Glu Ile Glu Lys Tyr Cys Ser Arg
          50          55          60
Arg Tyr Ile Ser Glu Tyr

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65

70

<210> 1126
 <211> 120
 <212> PRT
 <213> Pinus radiata

<400> 1126
 Gly Gly Glu Ile Arg Ile Leu Arg Gly Phe Phe Val Asn Gln Lys Thr
 1 5 10 15
 Asp Gly Gln Gly Ser Ser Phe Ala Ala Ser Ser Arg Asn Ser Ser
 20 25 30
 Phe Ser Asn Gly Tyr Asp Asn Pro Gln Asn Thr Asn Lys Asn Ser Ser
 35 40 45
 Ser Gly Gly Thr Gly Asp Ala Gly Ser Phe Glu Cys Asn Ile Cys Leu
 50 55 60
 Glu Leu Ala Gln Asp Pro Ile Val Thr Leu Cys Gly His Leu Phe Cys
 65 70 75 80
 Trp Pro Cys Leu Tyr Lys Trp Leu His Gly His Ser Lys Ser Gln Glu
 85 90 95
 Cys Pro Val Cys Lys Ala Leu Val Glu Asp Lys Ile Val Pro Leu
 100 105 110
 Tyr Gly Arg Gly Lys Val Gly Ser
 115 120

<210> 1127
 <211> 233
 <212> PRT
 <213> Pinus radiata

<400> 1127
 Met Gly Ala Pro Lys Gln Lys Trp Thr Ser Glu Glu Glu Gly Ala Leu
 1 5 10 15
 Lys Ala Gly Val Glu Lys Tyr Gly Thr Gly Lys Trp Arg Thr Ile Gln
 20 25 30
 Lys Asp Pro Glu Phe Gly His Cys Leu Ala Ala Arg Ser Asn Val Asp
 35 40 45
 Leu Lys Asp Lys Trp Arg Asn Met Ser Val Ser Ala Ser Gly Gln Gly
 50 55 60
 Ser Arg Asp Lys Val Lys Thr Pro Arg Val Lys Ala Ile Ala Ser Leu
 65 70 75 80
 Pro Tyr Ser Ser Val Thr Ala Glu Ser Thr Ser Val Phe Ser Ile Glu
 85 90 95
 Ala Thr Thr Ser Thr Thr Pro Asp Asn Leu Ile Ser Pro Lys Ser Ser
 100 105 110
 Ser Asn Gly Lys Ile His Ser Pro Arg Tyr Asp Gly Met Ile Leu Glu
 115 120 125
 Ala Leu Thr Ser Met Gln Asp Pro Asn Gly Ile Asp Ile Ala Thr Ile
 130 135 140
 Ala Ser Phe Met Glu Glu Arg His Glu Leu Pro Pro Asn Phe Lys Arg
 145 150 155 160
 Ala Leu Gly Thr Lys Leu Arg Arg Leu Val Ala Gln Glu Lys Val Ile
 165 170 175
 Lys Ile Arg Asn Ser Tyr Lys Leu Lys Asp Met Thr Ser Thr Glu Val
 180 185 190
 Thr Ser Glu Val Leu Gly Ser Ala Ile Pro Ile Asp Asn Ser Met Gln
 195 200 205
 Tyr Ser Asn Ala Phe Thr Asn Thr Ile Asp Thr Phe Ser Val Asp Arg
 210 215 220
 Val Asn Glu Ala Ser Met Ala Ala Ala
 225 230

<210> 1128
 <211> 144
 <212> PRT
 <213> Pinus radiata

<400> 1128
 His Ser Arg Pro Leu Ile Lys Glu Glu Ala Glu Ser Gly Asp Asn Ser
 1 5 10 15
 Ala Asn Ser Ala Asp Val Glu Thr Leu Leu Pro Gln Val Asp Glu Thr
 20 25 30
 Ala Ser Ala Asp Leu Thr Val Phe Pro Gly Phe Val Thr Pro Tyr Val
 35 40 45
 Pro Tyr Gly Phe Pro Ile Trp His Thr Phe Arg Pro Thr Ile Thr Gln
 50 55 60
 Thr Ser Asn Val Tyr Lys Pro Thr Ala Val Met Pro Thr Ala Pro Ile
 65 70 75 80
 Lys Met Asp Glu Cys Thr Gly Leu Ser Gln Leu Ser Leu Gly Gly Val
 85 90 95
 Ala Ala Ala Ser Ala Met Lys Pro Ser Glu Leu Ser Leu Lys Leu His
 100 105 110
 Gly Arg Pro Pro Ser Arg Gln Ser Ala Phe Gln Ala Lys Pro Ser Leu
 115 120 125
 Asn Glu Ser Ser Ser Leu Ser Ser Ser Asn Val Ile Ser Val Val
 130 135 140

<210> 1129
 <211> 187
 <212> PRT
 <213> Pinus radiata

<400> 1129
 His Pro Tyr Met Trp Gly Gly Gln Pro Leu Met Pro Pro Tyr Gly Thr
 1 5 10 15
 Pro Leu Pro Tyr Pro Ala Met Tyr Pro His Gly Gly Ile Tyr Ala His
 20 25 30
 Pro Ser Met Pro Pro Gly Ala Leu Pro Tyr Gly His Tyr Gly Met Pro
 35 40 45
 Ser Pro Gly Asn Ala Glu Val Thr Thr Thr Leu Ala Leu Pro Asn Ala
 50 55 60
 Glu Ala Glu Ala Lys Ser Ser Glu Gly Lys Glu Arg Asn Thr Met Lys
 65 70 75 80
 Arg Ser Lys Gly Ser Leu Gly Ser Leu Gly Met Ile Thr Gly Lys Gly
 85 90 95
 Gly Glu Gly Gly Lys Ala Thr Ser Gly Ser Ala Asn Glu Ala Met Ser
 100 105 110
 Gln Ser Gly Asp Ser Gly Ser Asp Gly Ser Ser Glu Gly Ser Glu Glu
 115 120 125
 Tyr Asn Thr Gln Thr Glu Ser Gln Val Ala Arg Lys Arg Ser Phe Asp
 130 135 140
 Gln Met Ile Val Asp Gly Ala Asn Ala Gln Ser Thr Asn Ile Gln Ser
 145 150 155 160
 Tyr Asn Ser Gln Ala Gly Glu Pro Tyr Val Thr Ser Gly Gly His Ala
 165 170 175
 Met Gly Asn Pro Ile Ser Gln Ala Val Ala Ala
 180 185

<210> 1130
 <211> 80
 <212> PRT
 <213> Pinus radiata

<400> 1130
 Gly Lys Val Thr Ala Ser Gly Lys Val Thr Ser Gly Val Asn Asp Leu
 1 5 10 15
 Phe Trp Glu Gln Phe Leu Thr Glu Thr Pro Gly Ser Ala Thr Asp Thr
 20 25 30
 Gln Glu Ala Glu Ser Lys Ile Gln Glu Thr Arg Thr Lys Asp Gln Asp
 35 40 45
 Glu Arg Leu Pro Glu Asn Gly Lys Cys Trp Ser Asn Lys Gln Thr Leu
 50 55 60
 Asp Gln Leu Thr Glu Gln Met Gly Gln Leu Ala Ser Gly Thr Gln Thr
 65 70 75 80

<210> 1131
 <211> 96
 <212> PRT
 <213> Pinus radiata

<400> 1131
 Met Asn Met Asp Ser Arg Gln Ser Gly Glu Glu Asp Cys Asn Val
 1 5 10 15
 Thr Arg Pro Gly Gly Gly Gly Ile Ser Leu His Val Ser Ser Val
 20 25 30
 Glu Tyr Cys Gln Lys Ser Ala Cys Val Ala His Asp Ile Ser Ser Asp
 35 40 45
 Glu Gln Asp Leu Ile Asn Arg Leu His Asn Leu Leu Gly Asp Arg Trp
 50 55 60
 Ala Leu Ile Ala Gly Arg Leu Pro Trp Arg Arg Glu Glu Ile Glu
 65 70 75 80
 Asn Tyr Cys Lys Met Arg Tyr Thr Ala Thr Ser Ser Ser Arg Ser
 85 90 95

<210> 1132
 <211> 193
 <212> PRT
 <213> Pinus radiata

<400> 1132
 Glu Arg Glu Arg Gly Arg Lys Pro Ala Asn Gly Arg Glu Glu Pro Leu
 1 5 10 15
 Asn His Val Glu Ala Glu Arg Gln Arg Arg Glu Lys Leu Asn Gln Lys
 20 25 30
 Phe Tyr Glu Leu Arg Ala Val Val Pro Asn Val Ser Lys Met Asp Lys
 35 40 45
 Ala Ser Leu Leu Gly Asp Ala Ala Ala Tyr Ile Lys Asp Leu Phe Ser
 50 55 60
 Lys Gln Gln Asp Leu Glu Ser Glu Arg Val Asp Met Gln Val Gln Ile
 65 70 75 80
 Asp Thr Ile Lys Lys Glu Leu Leu Met Asn Ser Leu Lys Leu Ala Ala
 85 90 95
 Lys Glu Ala Lys Asp Leu Ser Ser Ile Asp Leu Lys Gly Phe Ser Gln
 100 105 110
 Gly Lys Phe Pro Gly Leu Asn Ser Glu Val Arg Ile Val Gly Arg Glu
 115 120 125
 Ala Ile Ile Arg Ile Gln Cys Thr Lys His Asn His Pro Val Ala Arg
 130 135 140
 Leu Met Ile Ala Leu Gln Glu Leu Asp Leu Glu Val Leu His Ala Ser
 145 150 155 160
 Ile Ser Thr Val Lys Asp Ser Leu Ile Ile Gln Thr Val Ile Val Lys
 165 170 175
 Met Thr Arg Gly Leu Tyr Thr Glu Asp Gln Leu His Ala Leu Leu Cys

180 185 190

Lys

<210> 1133
 <211> 88
 <212> PRT
 <213> Pinus radiata

<400> 1133

Met	Ala	Tyr	Asn	Arg	Lys	His	Ala	Ala	Ala	Ala	Thr	Ser	Pro	Asp	Ser
1			5					10						15	
Ser	Leu	Gly	Ser	Asp	Asn	Glu	Ser	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly
			20					25						30	
Gly	Lys	Gly	Gln	Ser	Thr	Lys	Asn	Gly	Asn	Gly	Asn	Tyr	Ile	Arg	Glu
			35				40					45			
Gln	Asp	Arg	Leu	Leu	Pro	Ile	Ala	Asn	Val	Gly	Arg	Ile	Met	Lys	Arg
			50				55				60				
Ala	Leu	Pro	Gly	Asn	Ala	Lys	Ile	Ser	Lys	Asp	Ala	Lys	Glu	Thr	Val
65					70					75					80
Gln	Glu	Cys	Val	Ser	Glu	Phe	Ile								
							85								

<210> 1134
 <211> 141
 <212> PRT
 <213> Pinus radiata

<400> 1134

Met	Ala	Thr	Arg	Asn	Pro	Phe	Asp	Leu	Leu	Glu	Asp	Asp	Asp	Asn	Gly
1				5				10						15	
Asp	Pro	Ser	Ser	Leu	Leu	Asp	Thr	Leu	Ala	Ala	Ala	Lys	Asp	Lys	Pro
			20					25						30	
Ala	Ala	Val	Ala	Ala	Lys	Lys	Gln	Gln	Pro	Ala	Val	Ser	Ala	Ser	Gly
			35				40					45			
Lys	Leu	Pro	Thr	Lys	Pro	Leu	Pro	Pro	Ala	Gln	Ala	Val	Lys	Glu	Ser
			50				55				60				
Arg	Val	Ser	Pro	Asn	Glu	Gly	Gly	Arg	Gly	Arg	Gly	Gly	Gly	Arg	Gly
65					70				75					80	
Gly	Arg	Gly	Phe	Gly	Asn	Arg	Glu	Ser	Gln	Glu	Phe	Gly	Arg	Gly	Arg
			85						90					95	
Gly	Gly	Gly	Tyr	Asn	Val	Glu	Arg	Asn	Phe	Asn	Arg	Glu	Asn	Asn	Ala
			100					105						110	
Tyr	Ser	Gly	Ser	Arg	Val	Gly	Phe	Tyr	Asp	Asn	Asn	Ser	Asp	Leu	Ile
			115					120					125		
Pro	Ser	Arg	Asn	Glu	Asp	Gly	Asp	Gly	Ala	Ser	Asn	Asp			
			130				135					140			

<210> 1135
 <211> 43
 <212> PRT
 <213> Pinus radiata

<400> 1135

Met	Pro	Arg	Val	Lys	Leu	Ile	Ser	Arg	Asn	Phe	Met	Asp	Met	Val	Ala
1				5				10						15	
Ala	Leu	Pro	Ala	Ala	Lys	Leu	Asp	Arg	Leu	Tyr	Asp	Lys	Ser	Leu	His
			20					25						30	
Leu	Arg	Ser	Gly	Leu	Arg	Ser	Leu	Thr	Pro	Val					
			35				40								

<210> 1136
 <211> 48
 <212> PRT
 <213> Pinus radiata

<400> 1136
 Met Ala Glu Glu Met Asp Thr Pro Thr Lys Thr Thr Lys Thr Pro Thr
 1 5 10 15
 Ser Gln Glu Gln Thr Ser Thr Ser Thr Pro Val Ala Tyr Pro Glu Trp
 20 25 30
 Ala Ala Pro Ile Gln Ala Leu Tyr Asn Ser Gly Lys Thr Pro Leu Pro
 35 40 45

<210> 1137
 <211> 190
 <212> PRT
 <213> Pinus radiata

<400> 1137
 Ser Phe Ser Ser Thr Arg Glu Ser Met Glu Arg Arg Asp Gln Ser Pro
 1 5 10 15
 Val Ala Ala Arg His Pro Met Arg Lys His Tyr Arg Gly Val Arg Gln
 20 25 30
 Arg Gln Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro Gln Asn Arg
 35 40 45
 Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Ala Ala Leu
 50 55 60
 Ala Tyr Asp Arg Ala Ala Tyr Arg Trp Arg Gly Glu Cys Ala Arg Leu
 65 70 75 80
 Asn Phe Pro His Leu Phe Ser Lys Lys Tyr Gln Asn Ser Ser Pro Ser
 85 90 95
 Ser Thr Asn Gly Arg Ile Pro Arg Leu Ser Cys Glu Lys Ser Asp Gln
 100 105 110
 Lys Tyr Ala Tyr Asn Gly Asp Pro Val His Thr Asn Val Tyr Lys Gly
 115 120 125
 Pro Pro Ile Arg Ile Thr Ala Tyr Asn Gly Asp Pro Val Pro Ile Asp
 130 135 140
 Val Tyr Arg Ser Asp Pro Val Arg Val Ser Ala Tyr Thr Gly Asp Pro
 145 150 155 160
 Val Arg Ile Ser Ala Tyr Ser Gly Asp Pro Val Gly Asn Thr Val Thr
 165 170 175
 Leu Ala Glu Ser Glu Leu Glu Ser Ser Cys Ser His Glu Ser
 180 185 190

<210> 1138
 <211> 177
 <212> PRT
 <213> Pinus radiata

<400> 1138
 Leu Asp Tyr Met Glu Glu Gln Asn Trp Asp Ile Asn Gly Ala Lys Tyr
 1 5 10 15
 Asp Gly Ser Glu Lys Trp Lys Ala His Ser Ser Glu Gln Lys Asp Leu
 20 25 30
 Gly Thr Ile Pro Thr Lys Val Glu Gly Arg Ile Gly Asn Arg Glu Asn
 35 40 45
 Ser Leu Asp Val Thr Arg Gly Gly Ala Leu Trp Asp Ile Phe Arg Arg
 50 55 60
 Glu Asp Ile Pro Lys Leu Gln Asp Tyr Leu Leu Lys His Cys Gln Asp
 65 70 75 80
 Phe Arg His Ser Arg Asn Val Ser Val Asp Ser Val Val His Pro Ile

85 90 95
 His Asp Gln Thr Phe Tyr Leu Asn Glu Gly His Lys Lys Lys Leu Lys
 100 105 110
 Glu Glu Tyr Gln Val Glu Pro Trp Thr Phe Glu Gln His Leu Gly Glu
 115 120 125
 Ala Val Phe Ile Pro Ala Gly Cys Pro His Gln Val Arg Asn Leu Lys
 130 135 140
 Ser Cys Ile Lys Val Ala Leu Asn Phe Val Ser Pro Glu Asn Leu Gln
 145 150 155 160
 Glu Cys Ile Arg Leu Glu Asp Glu Leu Arg Leu Leu Pro Lys Asn His
 165 170 175
 Arg

<210> 1139
 <211> 148
 <212> PRT
 <213> Pinus radiata

<400> 1139
 Gly Pro Arg Glu Met Thr Glu Glu Glu Arg Glu Thr Lys Lys Ala Ala
 1 5 10 15
 Ser Val Ala Ala Thr Ala Ala Asp Gln Glu Leu Arg Lys Lys Val Leu
 20 25 30
 Arg Asp Leu His Ala Leu Ile Asn Pro Asn Ala Thr Gly Glu Ala Asp
 35 40 45
 Pro Ala Glu Phe Pro Gly Asp Asp Ala Thr Val Asp Gly Glu Val Thr
 50 55 60
 Asp Ala Glu Trp Phe Tyr Leu Val Ser Met Met Lys Ser Phe Gly Asn
 65 70 75 80
 Gly Leu Gly Val Pro Gly Gln Ala Phe Cys Gly Gly Met Pro Ile Trp
 85 90 95
 Ile Ile Gly Ser Glu Lys Leu Gln Ser Tyr Asn Cys Glu Arg Ala Arg
 100 105 110
 Gln Ala Gln Gln Phe Gly Ile Gln Thr Met Val Cys Ile Pro Thr Pro
 115 120 125
 Asn Gly Val Val Glu Leu Gly Ser Thr Asp Leu Asn Pro Gln Asn Trp
 130 135 140
 Asp Leu Ile Gln
 145

<210> 1140
 <211> 341
 <212> PRT
 <213> Pinus radiata

<400> 1140
 Met Cys Gly Gly Ala Ile Ile Lys Glu Phe Ile Pro Ala Asn Arg Ser
 1 5 10 15
 Arg Arg Val Thr Ala Arg Glu Leu Trp Pro Asp Phe Asp Thr Phe Ala
 20 25 30
 Glu Phe Ile Asn Gly Gly Ala Thr Gln Glu Thr Phe Asn Lys Pro Gly
 35 40 45
 Lys Leu Asp Glu Gly Cys Lys Gln Lys Ser Lys Pro Ser Lys Gly Ser
 50 55 60
 Val Lys Thr Gln Gln Glu Phe Cys Ser Gly Phe Glu Gly Gly Arg Ser
 65 70 75 80
 Glu Val Ile Pro Pro Leu Glu Asp Val Glu Gly Ser Thr Pro Thr Ile
 85 90 95
 Gly Gly Arg Lys Arg Lys Asn Val Tyr Arg Gly Ile Arg Gln Arg Pro
 100 105 110

Trp Gly Lys Trp Ala Ala Glu Ile Arg Asp Pro Ser Lys Gly Val Arg
 115 120 125
 Val Trp Leu Gly Thr Phe Asn Thr Ala Glu Glu Ala Ala Lys Ala Tyr
 130 135 140
 Asp Ala Ala Ala Lys Arg Ile Arg Gly Lys Lys Ala Lys Leu Asn Phe
 145 150 155 160
 Ala Asp Asn Ser Cys Ser Val Lys Asn Asp Thr Ser Lys Lys Leu Ser
 165 170 175
 Gly Lys Lys Gly Lys Leu Cys Ser Lys His Pro Ala Leu Leu Leu Glu
 180 185 190
 Gly Phe Asn Ala Ser Cys Lys Val Lys Pro Ser Tyr Ser Ala Asn Pro
 195 200 205
 Asp Leu Leu Gly Gly Tyr Asn Ile Asn Arg Lys Val Lys Ala Ser Leu
 210 215 220
 Ser Gly Val Gly Lys Ser Asp Leu Thr Ile Cys Gly Tyr Asp Asp Met
 225 230 235 240
 Glu Tyr Gly Asp Ser Gly Phe Ser Lys Pro Ser Ala Pro Phe Gln Asn
 245 250 255
 Asn Ser Asn Ala Cys Thr Val Gln Phe Ser Glu His Ser Asn Leu Thr
 260 265 270
 Gln Thr Ser Gln Lys Ser Cys Ser Cys Glu Ile Cys Ser His Asn Tyr
 275 280 285
 Ser Glu Met Ser Asn Val Met Pro Pro Ala Tyr Gly Asn Ala Val Asn
 290 295 300
 Phe Glu Pro Val Gln Thr Ser Asn Pro Gly Gly Tyr Phe Asp Ser Asp
 305 310 315 320
 His Ser Ser Met Ser Phe Glu Gly Ala His Phe Pro Trp Ala Gln Glu
 325 330 335
 Ile Lys Thr Pro Glu
 340

<210> 1141

<211> 181

<212> PRT

<213> Pinus radiata

<400> 1141

Ala Lys Thr Leu His Pro Cys Trp Asp Ala Tyr Gln Leu Glu Asp Glu
 1 5 10 15
 Arg Ala Ser Ala Val Tyr Ile Asn Val Phe Ser Gly Asp Ala Thr Thr
 20 25 30
 Glu Phe Pro Ser Ala Leu Gln Leu Gly Arg Gly Gly Ile Leu Ala Asp
 35 40 45
 Ala Met Gly Leu Gly Lys Thr Val Met Thr Ile Ser Leu Leu Leu Ala
 50 55 60
 Asn Ser Gly Lys Gly Gly Phe Ser Gly Met Asp Thr Val Glu Pro Phe
 65 70 75 80
 Ser Ala Asn Ser Cys Ser Glu Lys Thr Ile Ile His Pro Tyr Asn Ile
 85 90 95
 Gly Val Glu Leu Gly Pro Ser Gln Tyr Thr Asn Lys Thr Gln Gly Thr
 100 105 110
 Ser Met Leu Arg Arg Ser Ser Ser Gly Leu His Lys Gly Gly Asn
 115 120 125
 Leu Ile Val Cys Pro Met Thr Leu Leu Ser Gln Trp Lys Thr Glu Leu
 130 135 140
 Glu Thr His Val Gln Ser Gly Thr Met Ser Val Tyr Val His Tyr Gly
 145 150 155 160
 Gln Ser Arg Thr Lys Asp Val Lys Ser Leu Leu Gln His Asp Val Val
 165 170 175
 Leu Thr Thr Tyr Gly
 180

<210> 1142
 <211> 59
 <212> PRT
 <213> Pinus radiata

<400> 1142
 Met Phe Val Gly Met Met Ser Glu Val Gly Ser Pro Thr Ser Gln Asp
 1 5 10 15
 Ser Arg Asn Ser Glu Asp Gly Glu Arg Glu Asn Cys Ala Val Arg Glu
 20 25 30
 Gln Asp Arg Phe Met Pro Ile Ala Asn Val Ile Arg Ile Met Arg Lys
 35 40 45
 Val Leu Pro Thr His Ala Lys Ile Ser Asp Asp
 50 55

<210> 1143
 <211> 133
 <212> PRT
 <213> Pinus radiata

<400> 1143
 Met Gly Phe Glu Gln Thr Arg Gly Gly Gly Gly Ala Lys Met Thr
 1 5 10 15
 Gln His Gln Val Val Thr Thr Glu Leu Val Arg Gln Ala Thr Glu Arg
 20 25 30
 Leu Arg Lys Leu Cys Arg Thr Gly Val Lys Val Glu Leu Arg Asp Phe
 35 40 45
 Phe Gln Leu Cys Ile Val Leu Ala Lys Ser Ile Asp Ser Ala Val Val
 50 55 60
 Tyr Asn Gln Ile Pro Thr Met Val His Glu Leu Pro Gln Leu Val Arg
 65 70 75 80
 Gln Val Phe Glu Arg Lys Asp Asp Ile Arg Leu Gln Pro Ala Ile Met
 85 90 95
 Val Leu Met Leu Ser Val Lys Asn Ala Cys Arg Ser Gly Trp Phe Arg
 100 105 110
 Val Thr Asp Thr Asp Glu Leu Leu Thr Met Ser Lys Glu Leu Ser Ser
 115 120 125
 Arg Phe Thr Ser Thr
 130

<210> 1144
 <211> 169
 <212> PRT
 <213> Pinus radiata

<400> 1144
 Met Thr Arg Lys Cys Ser His Cys Gly Asn Asn Gly His Asn Ser Arg
 1 5 10 15
 Thr Cys Pro Asn Arg Gly Gly Val Lys Leu Phe Gly Val Arg Leu Thr
 20 25 30
 Asp Gly Pro Ile Arg Lys Ser Ala Ser Met Gly Asn Leu Met Met Met
 35 40 45
 Ser Asn Pro Ser Ser Pro Ala Asp Pro Ser Glu Pro Ala Ser Ala Ala
 50 55 60
 Ala Ala Ala Ala Ala Ala Ala Ser Gly Tyr Leu Ser Asp Gly Leu
 65 70 75 80
 Val Glu Ala Ser Thr Ser Ser Asn Ser Arg Glu Arg Lys Lys Gly Val
 85 90 95
 Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu Gly Leu Gln Lys
 100 105 110

Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn Phe Val Ile Thr
 115 120 125
 Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Ile Arg
 130 135 140
 Gln Ser Asn Met Thr Arg Lys Lys Arg Arg Ser Ser Leu Phe Asp Met
 145 150 155 160
 Thr Pro Val Ser Phe Phe Phe Leu Ser
 165

<210> 1145
 <211> 103
 <212> PRT
 <213> Pinus radiata

<400> 1145
 Val Ser Ser Arg His Glu Phe Ala Val Ser Gln Met Ala Tyr Leu Gln
 1 5 10 15
 Ala Leu Arg Asn Ala Gly Ala Thr Leu Arg Gln Phe Ala Glu Leu Glu
 20 25 30
 Ser Met Glu Leu Gln Lys Thr Ser Pro Tyr Pro His Leu Arg His Tyr
 35 40 45
 Arg Val Thr Leu Pro Pro Ser Pro Pro Pro Leu Pro Pro Pro Pro
 50 55 60
 Pro Pro Pro Pro Leu Ser Leu Thr Pro Ser Pro Ser Tyr Gly Ser Ala
 65 70 75 80
 Thr Phe Pro Ser Ser Ile Pro Val Asn Arg Ser Ile Tyr Arg Cys Pro
 85 90 95
 Tyr Gln Gln Cys Ser Pro Ser
 100

<210> 1146
 <211> 153
 <212> PRT
 <213> Pinus radiata

<400> 1146
 Gln Leu Pro Asp Glu Ala Ile Ala Leu Ala Ala Ala Ser His Ile Glu
 1 5 10 15
 Arg Glu Leu Gln Ile Thr Ser Trp Asn Leu Ser Cys Asn Phe Val Ala
 20 25 30
 Ser Thr Leu Gln Gly Arg Glu Cys Ile Glu Arg Leu Glu Ile Thr Gly
 35 40 45
 Ile Gly Asp Pro Ser Gly Arg Gly Leu Gly Phe Ser Tyr Leu Arg Val
 50 55 60
 Ala Pro Lys Pro Pro Ile Ser Ser Ala Leu Val Lys Lys Lys Ala Ala
 65 70 75 80
 Ala Ala Arg Gly Gly Ser Ala Val Thr Gly Thr Asp Ala Asp Leu Arg
 85 90 95
 Arg Leu Ser Met Asp Ala Ala Arg Glu Val Leu Leu Lys Phe Asn Val
 100 105 110
 Asp Glu Glu Gln Ile Glu Lys Met Thr Arg Trp His Arg Ile Ala Met
 115 120 125
 Val Arg Lys Leu Ser Ser Glu Gln Ala Ala Ser Gly Val Lys Val Asp
 130 135 140
 Ala Thr Ala Leu Asn Lys Phe Ala Arg
 145 150

<210> 1147
 <211> 73
 <212> PRT
 <213> Pinus radiata

<400> 1147
 Met Lys Ser Pro Ser Thr Ser Cys Leu Ser His Pro Val Glu Gly Glu
 1 5 10 15
 Gln Lys Ser Ile Asn Ser Glu Leu Trp His Ala Cys Ala Gly Pro Leu
 20 25 30
 Val Ser Leu Pro Ser Val Gly Ser Val Tyr Tyr Phe Pro Gln Gly
 35 40 45
 His Ser Glu Gln Val Ala Ala Ser Thr Gln Lys Val Ala Asp Thr His
 50 55 60
 Ile Pro Asn Tyr Pro Asn Leu Pro Tyr
 65 70

<210> 1148
 <211> 213
 <212> PRT
 <213> Pinus radiata

<400> 1148
 Leu Lys Val Gln Trp Asp Glu Ile Ser Ala Ile Ala Arg Pro Glu Arg
 1 5 10 15
 Val Ser Pro Trp Lys Leu Glu Pro Ser Leu Thr Pro Val Ala Val Asn
 20 25 30
 Pro Leu Pro Val Ala Arg Gly Lys Arg Pro Arg Pro Asn Ile Leu Pro
 35 40 45
 Ser Ser Ser Asp Leu Ser Val His Asp Lys Ala Pro Val Asp Ser Thr
 50 55 60
 Gln Val His Arg Phe Pro Arg Val Leu Gln Gly Gln Glu Val Met Thr
 65 70 75 80
 Leu Gly Gly Ser Leu Gly Asp Gly Glu Leu Glu Ser Gly Gln Lys Met
 85 90 95
 Val Ala Trp Gly Gly Ser Lys Leu Asp Asp Val Lys Ala Glu Gly Met
 100 105 110
 Gly Cys Gln Arg Arg Leu Val Ser Glu Asn Trp Met Pro Pro Leu Arg
 115 120 125
 His Asp Ser Leu Tyr Ser Asp Thr Phe Ser Ser Phe Gln Pro Val Gly
 130 135 140
 Glu Val Gln Glu Phe Arg Gly Ser Leu Thr Asn Ser Ile Leu Glu Asp
 145 150 155 160
 Gly Gln Gln Pro Lys Leu Ser Arg Lys Gln Phe Gln Asp Gln Glu Gly
 165 170 175
 Lys Ile Val Asp Gly Ser Gly Leu Trp Ser Met Ser Phe Pro Asn Ser
 180 185 190
 Leu Gln Leu Cys Glu Ser Asn Arg Lys Met Ser Ala Thr Ser Ala Ala
 195 200 205
 Gln Ser His Lys Gln
 210

<210> 1149
 <211> 217
 <212> PRT
 <213> Pinus radiata

<400> 1149
 Glu Leu Thr Ser Asp Ser His Arg Gln Ala Thr Leu Gln Leu Glu Ala
 1 5 10 15
 Glu Val Thr Ala Trp His Ile Ser Phe Cys Ser Leu Ile Lys Ser Gln
 20 25 30
 Gln Asp Tyr Ile Cys Ala Leu Tyr Glu Trp Ala Arg Leu Ser Leu Val
 35 40 45
 Gln Leu Gly Asn Glu Ala Gln Trp Glu Arg Gly Asn Arg Pro Pro Ile

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      50              55              60
Tyr Thr Leu Cys Asp Val Trp Gln Gln Val Leu Lys Arg Leu Pro Asp
65      70      75      80
Lys Val Ala Ser Glu Ser Ile Lys Ser Phe Ile Ser Val Val His Ala
      85      90      95
Ile Val Met Gln Gln Ala Asp Glu Gln Lys Arg Lys Lys Lys Ala Glu
      100      105      110
Asn Ile Ser Arg Glu Leu Gln Lys Lys Met Ile Ala Leu Arg Asn Ile
      115      120      125
Glu Lys Lys Tyr Tyr Ser Ser Tyr Ser Ile Pro Ala Arg Ala Asp Ala
      130      135      140
Thr Thr Glu Ser Gln Phe Glu Leu Gly His Thr Asp Pro Leu Ala Glu
145      150      155      160
Lys Arg Ala Glu Ile Glu Ile Tyr Lys Arg Arg Leu Glu Asp Glu Lys
      165      170      175
Ala Asn Tyr Ser Lys Ser Ala Arg Gly Thr Arg Glu Met Thr Leu Asn
      180      185      190
Asn Ile Gln Thr Gly Leu Pro Gly Leu Phe Gln Ala Leu Ser Ser Phe
      195      200      205
Ser Ser Val Cys Ala Ser Ser Phe Glu
210              215

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<210> 1150
<211> 33
<212> PRT
<213> Pinus radiata

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<400> 1150
Met Ala Met Gly Glu Ala Glu Arg Ile Thr Gly Pro Trp Ser Pro Glu
1      5      10      15
Glu Asp Thr Ser Leu His Lys Leu Val Glu Lys Ser Gly Pro Arg Asn
      20      25      30
Trp

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<210> 1151
<211> 127
<212> PRT
<213> Pinus radiata

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<400> 1151
Trp Arg Pro Ala Lys Phe Ala Arg Asn Leu Leu Pro Asn Tyr Phe Lys
1      5      10      15
Pro Asn Asn Phe Ser Ser Phe Gly Arg Gln Leu Asn Thr Tyr Gly Phe
      20      25      30
Arg Lys Ile Val Pro Asp Arg Trp Glu Phe Ser Asn Glu Phe Phe Arg
      35      40      45
Lys Gly Glu Lys Gln Leu Leu Ser Glu Ile His Arg Arg Lys Gly Leu
      50      55      60
Ile Gln Pro Pro Pro Pro Glu Asn Arg Ser Ile Ser Pro Ser Asn
65      70      75      80
Ser Gly Asp Glu Gln Thr Trp Ser Ser Thr Ser Ser Pro Asn Ser Ser
      85      90      95
Thr Gly Val Asp Ala Leu Ser His Lys Asn Ala Ile Glu Glu Asn Glu
      100      105      110
Lys Leu Arg Lys Glu Asn Leu Leu Leu Val Ser Glu Leu Thr Gln
      115      120      125

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<210> 1152
<211> 104
<212> PRT

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<213> Pinus radiata

<400> 1152

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Pro His Gly Leu Gln His His Ser Ser Asp Asp Ala Asn Gly Asp Gly
1      5      10
Asp Lys Arg Ile Gly Val Glu Thr Gly Ser Ser Val Cys Pro Glu Leu
20      25      30
Trp His Ala Cys Ala Gly Pro Leu Ile Ser Leu Pro Pro Lys Gly Ser
35      40      45
Arg Val Val Tyr Phe Pro Gln Gly His Leu Glu Gln Ile Ala Asp Asn
50      55      60
Glu Leu His Arg Gly Gly Arg Gly Ser Phe Leu Asn Ile Asn His Ala
65      70      75      80
Ala Ala Pro Met Ala Glu Glu Ala Ser Ser Ala Ala Ala Leu Asn Ile
85      90      95
Pro Pro Ser Phe Ile Ser Gln Pro
100

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<210> 1153

<211> 146

<212> PRT

<213> Pinus radiata

<400> 1153

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Glu Thr Leu Thr Leu Lys Ile Arg Ser Glu Met Asp Ser Lys Phe
1      5      10      15
Arg Glu Ala Thr His Lys Gly Pro Leu Trp Asp Glu Val Ser Arg Ala
20      25      30
Leu Ala Glu His Gly Tyr Gln Arg Ser Ser Lys Lys Cys Arg Glu Lys
35      40      45
Phe Glu Asn Leu Tyr Lys Tyr Tyr Lys Lys Thr Lys Glu Gly Lys Ala
50      55      60
Gly Arg Gln Asp Gly Lys His Tyr Arg Phe Phe Ser Gln Leu Glu Ala
65      70      75      80
Leu Tyr Gly Gly Thr Thr Ile Asp Ala Ala Asp Ser Cys Phe Gly Val
85      90      95
Thr Thr Arg Thr Asn Leu Thr Glu Ser Pro Gly Leu Asp Phe Asn Gly
100      105      110
Asp Gly Ala Ser Gln Lys Tyr Ala Asp Thr His His Asn Ser Glu Gly
115      120      125
Phe Ser Leu Ser Ser Asp Ser Ser Ser Asp Asp Glu Tyr Ser His Asp
130      135      140
Ile Gln
145

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<210> 1154

<211> 105

<212> PRT

<213> Pinus radiata

<400> 1154

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Ile Phe Tyr Arg Leu His Cys Asn Leu Gly Glu Lys Ser Asn Lys Ile
1      5      10      15
Tyr Ile Cys Leu Phe Thr Met Glu Leu Ala Asp Glu His Ser Ile Leu
20      25      30
Arg Tyr Lys Lys Pro Lys Leu Ser Lys Asn Val Val Ser Glu Arg Arg
35      40      45
Arg Arg Gln Lys Met Asn Lys Leu Leu Tyr Thr Leu Arg Ala Leu Val
50      55      60
Pro Asn Ile Ser Lys Met Asp Lys Ala Ser Ile Leu Ala Asp Ala Ile
65      70      75      80

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Glu Tyr Val Glu Lys Leu Lys Gln Gln Val Glu Arg Ala Glu Ser Asp
 85 90 95
 Val Gln Ser Thr Asn Val Ser Ala Leu
 100 105

<210> 1155
 <211> 83
 <212> PRT
 <213> Pinus radiata

<400> 1155
 Arg Glu Phe Asn Ile Asn Ala Asp Val Tyr Ala Gln Asp Ser Ile Glu
 1 5 10 15
 Leu Leu Lys Gln Ser Gly Ile Asp Phe Glu Lys Asn Glu Glu Lys Gly
 20 25 30
 Ile Asp Ser His Arg Phe Gly Glu Leu Leu Met Ser Ser Gly Val Val
 35 40 45
 Leu Asn Glu Asn Val Asn Trp Ile Thr Phe His Ser Gly Tyr Asp Phe
 50 55 60
 Gly Tyr Leu Leu Lys Leu Leu Thr Cys Gln Asn Leu Pro Pro Glu Glu
 65 70 75 80
 Ser Asp Phe

<210> 1156
 <211> 170
 <212> PRT
 <213> Pinus radiata

<400> 1156
 Met Ala Asn Arg Ser Leu Trp Gly Gly Ser Asp Phe Asp Tyr Glu Asn
 1 5 10 15
 Glu Ala Asp Thr Arg Lys Gly Pro Trp Thr Val Glu Glu Asp Met Gln
 20 25 30
 Leu Gly Ile Val Asn Leu His Gly Glu Gly Arg Trp Asn Phe Leu Ala
 35 40 45
 Arg Ala Ser Gly Leu Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp
 50 55 60
 Val Asn Tyr Leu Arg Pro Asp Leu Lys Arg Ser Lys Ile Thr Pro Glu
 65 70 75 80
 Glu Glu Arg Leu Ile Ile Glu Leu His Arg Arg Trp Gly Asn Arg Trp
 85 90 95
 Ser Arg Ile Ala Gln Ser Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys
 100 105 110
 Asn Phe Trp Arg Thr Arg Met Lys Gly Lys Leu Asn Ser Glu Thr Gln
 115 120 125
 Lys Asp Ile Ala Gly Val Asp Ala Asp Asp Gly Val Gln Phe Glu Ser
 130 135 140
 Glu Leu Gly Ser Cys Arg Leu Pro Val Ile Ser Ser His Ala Leu Pro
 145 150 155 160
 Glu Val Asp Val Ala Glu Pro Ser Ser Thr
 165 170

<210> 1157
 <211> 119
 <212> PRT
 <213> Pinus radiata

<400> 1157
 Gly Thr Val Gly Arg Lys Arg Arg Arg Ile His Arg Ser Ser Ile Gly
 1 5 10 15

Val Thr Gly Gly Arg Gly Leu Arg His Phe Ser Met Lys Val Cys Lys
 20 25 30
 Lys Val Glu Ser Lys Gly Trp Thr Thr Tyr Asn Glu Val Ala Ser Glu
 35 40 45
 Leu Val Ala Glu Phe Val Asn Pro Asn Ser Thr His Leu Ser Gln Asp
 50 55 60
 Gln Gln Gln Phe Asp Glu Lys Asn Ile Arg Arg Val Tyr Asp Ala
 65 70 75 80
 Leu Asn Val Leu Met Ala Met Asp Ile Ile Ser Lys Glu Lys Lys Glu
 85 90 95
 Ile Arg Trp Lys Gly Leu Pro Thr Thr Asn Leu Ser Asp Ile Glu Arg
 100 105 110
 Leu Lys Thr Glu Arg Lys Arg
 115

<210> 1158

<211> 97

<212> PRT

<213> Pinus radiata

<400> 1158

Cys Pro Arg Ala Phe Ala Arg Ala Tyr Asn Leu Lys Thr His Met Ala
 1 5 10 15
 Thr His Asp Pro Asn Arg Leu Lys Pro His Val Cys Pro His Arg Ser
 20 25 30
 Cys Ala Arg Ser Phe Ser Arg Lys His Asp Leu Gly Arg His Leu Val
 35 40 45
 Ser Ile His Arg Asp Asp Ser Val Val Ser Thr Pro Ser Ala Ser Met
 50 55 60
 Lys Ser Ile Gly Val Asp Ser Gly Arg Arg Ser Trp Cys Asp Asn Cys
 65 70 75 80
 Gly Lys Gly Thr Ile Gly Ala Ser Cys Gln Cys Ser Cys Ala Asp Ile
 85 90 95
 Lys

<210> 1159

<211> 162

<212> PRT

<213> Pinus radiata

<400> 1159

His Ala Pro Ile Phe Cys Arg Val Ala Arg Asn Phe Gln Leu Arg Val
 1 5 10 15
 Ile Leu Lys Glu Asn Arg Arg Arg Glu Thr Phe Asp Gly Phe Leu Arg
 20 25 30
 Glu Asp His Glu Lys Val Ser Gln Leu Val Thr Gln His Tyr Lys Val
 35 40 45
 Gln Leu Glu Thr Lys Glu Ile Ser Val Lys Gly Trp Asn Trp Gly Ser
 50 55 60
 Thr Asp Val Gln Gly Asn Asp Leu Ala Phe Val Val Ala Asn Arg Thr
 65 70 75 80
 Ala Phe Glu Val Pro Leu Arg Ser Ile Thr Asn Ser Asn Ile Ala Gly
 85 90 95
 Arg Thr Glu Val Ser Leu Glu Phe Ser Thr Ala Pro Ala Pro Ser Ala
 100 105 110
 Ser Lys Ser Lys Lys Gly Arg Pro Asp Glu Leu Thr Glu Ile Arg Phe
 115 120 125
 Tyr Val Pro Gly Thr His Thr Lys Asp Asp Asp Asp Glu Ala Asp Ile
 130 135 140
 Thr Lys Asp Asp Glu Glu Val Ser Ala Ala Gln Ala Phe His Asp Met

145	150	155	160
Ile Lys			

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<210> 1160
<211> 163
<212> PRT
<213> Pinus radiata
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[illegible]

<210> 1161
<211> 148
<212> PRT
<213> Pinus radiata

[illegible]

<210> 1162

<211> 48
 <212> PRT
 <213> Pinus radiata

<400> 1162
 Phe Leu Glu Ala Leu Glu Lys Arg Glu Glu Asp Arg Met Met Arg Glu
 1 5 10 15
 Glu Ala Trp Lys Arg Gln Glu Met Ala Arg Leu Asn Lys Asp Gln Glu
 20 25 30
 Leu Arg Ser Gln Glu Arg Ser Met Ala Ala Ser Arg Asp Leu Ala Leu
 35 40 45

<210> 1163
 <211> 255
 <212> PRT
 <213> Pinus radiata

<400> 1163
 Val Ala Leu Ser Asn Asn Pro Leu Ile Phe Ser Ala Lys Val Glu Asn
 1 5 10 15
 Gly Thr Pro Ser Tyr Asp Gly Leu Lys His Ala Asn Thr Asn Pro Met
 20 25 30
 Pro Phe Ser Gly Leu Gly Asn Val Ser Met Gly Pro Leu Phe Tyr Gln
 35 40 45
 Ala Asn Pro Ile Gln Arg Val Lys Arg Val Arg Asp Thr Ser Phe Ile
 50 55 60
 Met Gly Pro Pro Ser Ser Pro Phe Gly Arg Met Gly Val Asn Gly His
 65 70 75 80
 Met Gly Met Asn Asp Val Ser Lys Ser Leu Gln Pro Gly Phe Lys Ala
 85 90 95
 Arg Val Pro Tyr Pro Leu Gln Ala Ala Arg Ser Asp Ser Phe Val Ala
 100 105 110
 Gln Gly Cys Phe Pro Tyr Asp Pro Asn Leu Ser Ser Thr Ser Asn Leu
 115 120 125
 Pro Leu Gly Gly Phe Ser Ser Gly Ser His Ala Val Met Asn Gly Thr
 130 135 140
 Phe Ser Ser Ser Arg Leu Phe Ser Gly Gln Lys Leu Glu Leu Pro Ser
 145 150 155 160
 Ser Gln Phe Ala Glu Ser Val Gln Thr Ala Gly Ser Ser Ile Asn Pro
 165 170 175
 Val Leu Asn Arg Ser Thr Pro Leu Leu Leu Pro Pro Val Pro Thr Gln
 180 185 190
 Thr Ile Asn Gln Val Asp Tyr Ser Phe Ser Thr Pro Lys Asn Ser Gly
 195 200 205
 Leu Leu Glu Ser Met Phe Gln Glu Ala Gln Thr Met Gly Gly Val Lys
 210 215 220
 Ala His Ser Ser Ser Asn Ser Ser Ile Asp Leu Gln Gly Gly Ser Lys
 225 230 235 240
 Ser Ser Ile Ser Asn Pro Leu Asn Asn Gly Phe Leu Cys Arg Ser
 245 250 255

<210> 1164
 <211> 147
 <212> PRT
 <213> Pinus radiata

<400> 1164
 Ile Arg Met Glu Glu Pro Leu Gln Ile Ile Asn Ser Ser Pro Ile Gln
 1 5 10 15
 Gln Gln His Asp His Asp Asp Asp Asp His Gly His Gly His Glu Glu
 20 25 30

Glu Val Ile Pro His Pro Leu Leu Pro Pro Pro Gly Asp Thr Cys Ile
 35 40 45
 Val Pro Tyr Ile Met Pro Val Ser Thr Ser Thr Ala Glu Lys His Pro
 50 55 60
 Pro Gln Pro Thr Asn Ile Ala Phe Asn Gly Pro Glu Thr Glu Glu Asp
 65 70 75 80
 Asp Lys Lys Arg Asp Arg Glu His Lys Lys Arg Ser Lys Asn Trp Thr
 85 90 95
 Arg Val Glu Thr Leu Lys Leu Ile Lys Leu Arg Thr Glu Phe Glu Pro
 100 105 110
 Arg Phe Ser Arg Ser Gly Arg Lys Thr Glu Leu Trp Asp Glu Ile Ala
 115 120 125
 Glu Ser Leu Arg Lys Glu Gln Phe Phe Arg Asp Ala Gln Cys Arg
 130 135 140
 Asp Lys Trp
 145

<210> 1165
 <211> 202
 <212> PRT
 <213> Pinus radiata

<400> 1165
 Met Asp Gln Gln Gln Pro Thr Ile Pro Ala Leu Pro Gln Val Gly Tyr
 1 5 10 15
 Gly Thr Asn Pro Tyr Ile Ala Pro Pro Ile Gly Gly Pro Pro His Pro
 20 25 30
 Gln Leu Ala Ser Tyr His Gln Gln Leu Gln Ala Phe Trp Gly Asn Gln
 35 40 45
 Met Arg Glu Val Glu Gln Ala Gln Asp Phe Lys Thr His Ser Leu Pro
 50 55 60
 Leu Ala Arg Ile Lys Lys Ile Met Lys Ala Asp Glu Asp Val Lys Met
 65 70 75 80
 Ile Ser Ala Glu Ala Pro Val Val Phe Ala Lys Ala Cys Glu Met Phe
 85 90 95
 Ile Leu Glu Leu Thr Leu Arg Ser Trp Ile His Thr Glu Glu Asn Lys
 100 105 110
 Arg Arg Thr Leu Gln Lys Asn Asp Ile Ala Ala Ile Gly Arg Thr
 115 120 125
 Asp Ile Phe Asp Phe Leu Val Asp Ile Val Pro Arg Asp Glu Phe Lys
 130 135 140
 Asp Glu Gly Leu Val Ile Pro Arg Ala Gly Ala Val Pro Phe Met
 145 150 155 160
 Gly Pro Gly Asp Asn Val Pro Ser Tyr Tyr Val Ala Gln Gln Ala
 165 170 175
 Pro Asn Val Ala Ala Tyr Ala Pro Thr Gln Gln Met Arg Ser Lys
 180 185 190
 Ala Pro Ala Pro Pro Pro His Gly Ser Ser
 195 200

<210> 1166
 <211> 143
 <212> PRT
 <213> Pinus radiata

<400> 1166
 Gln Gly Ser Leu Thr Leu Pro Arg Thr Leu Ser Arg Arg Thr Val Asp
 1 5 10 15
 Asp Val Trp Arg Glu Ile His Lys Glu Asn Ile Asp Gly Asn Gly Asn
 20 25 30
 Ala Pro Ala Asn Gln Ala Arg Gln Pro Thr Phe Gly Glu Met Thr Leu

```

      35              40              45
Glu Asp Phe Leu Val Lys Ala Gly Val Val Arg Glu Asp Ala Glu Gln
  50              55              60
Gly Asp Gly Gln Ser Phe Gly Ala Phe Arg Asn Ala Leu Asp Gly Glu
  65              70              75              80
Phe Val Ala Asn Leu Ala Glu Arg Asn Gly Asp Asn Arg Leu Gly Ile
      85              90              95
Gly Asn Ser Leu Gly Leu Gly Phe Gly Glu Arg Gly His Arg Asn Gly
  100              105              110
Glu Val Gly Ser Asn Lys Ser Gly Ala Gly Gly Val Pro Gly Leu Ser
  115              120              125
Leu Ser Pro Thr Asn Val Phe Leu Ile Met Leu Pro Trp Ile Trp
  130              135              140

```

<210> 1167

<211> 90

<212> PRT

<213> Pinus radiata

<400> 1167

```

Phe Gln Arg Arg Lys Lys Lys Ser Ile Gly Arg Gly Cys Leu Lys Thr
  1              5              10              15
Ser Ile Asn Asp Val Glu Gln Leu Lys Ala Glu Lys Leu Leu Lys
  20              25              30
Ser Arg Ile Glu Lys Lys Ala Ser Tyr Phe His Glu Leu Glu Gln
  35              40              45
Ile Ile Gly Leu Gln Asn Leu Val Lys Arg Asn Glu His Arg Tyr Ser
  50              55              60
Ser Gly Asn Thr Pro Ser Gly Gly Val Ser Leu Pro Phe Ile Leu Val
  65              70              75              80
Gln Thr His Pro Arg Ala Thr Val Glu Ile
      85              90

```

<210> 1168

<211> 105

<212> PRT

<213> Pinus radiata

<400> 1168

```

Gly Ile Arg Arg Ala Thr Arg Gln Lys Ser Gly Ile Leu Ser Ser Val
  1              5              10              15
Leu Ser Asn Gln Asn Ala His Leu Ser Val Leu Ala Ala Ala Ser
  20              25              30
Ala Val Ala Thr Lys Ser Met Phe His Val Phe Tyr Asn Pro Arg Thr
  35              40              45
Ser Pro Ala Glu Phe Ile Ile Pro Tyr Gln Lys Tyr Val Lys Ser Cys
  50              55              60
Lys Gln Pro Leu Ser Ile Gly Met Arg Phe Lys Met Arg Phe Glu Thr
  65              70              75              80
Glu Asp Thr Ala Glu Arg Arg Tyr Thr Gly Met Ile Thr Ala Ile Gly
      85              90              95
Asp Ala Asp Pro Ala Arg Trp Pro Gly
  100              105

```

<210> 1169

<211> 106

<212> PRT

<213> Pinus radiata

<400> 1169

```

Gln Asp Thr His Ser Glu Pro Met Ala Met Glu Met Gly Leu Val Ile

```

```

      1           5           10           15
Asp Gly Asp Arg Phe Ser Ser Glu Gly Asp Gly Asp Ile Met Leu Asp
      20           25           30
Gly Glu Asp Leu Leu Pro Glu Ile Asn Asp Met Phe Trp Glu Gln Phe
      35           40           45
Leu Ala Glu Ser Ala Thr Ser Gly Gly Thr Glu Glu Ala Glu Ser Ala
      50           55           60
Ala Gln Glu Ser Leu Thr Lys Asp Gln Asp Glu Lys Pro Ser Glu Asn
      65           70           75           80
Gly Asn Trp Trp Lys Lys Asn Gln Asn Met Asp Asn Leu Thr Glu Gln
      85           90           95
Met Gly Gln Leu Ala Ser Glu Ser Asn Pro
      100           105

```

<210> 1170

<211> 144

<212> PRT

<213> Pinus radiata

<400> 1170

```

Asp Gly Ala Val Arg Asp Ala Gly Arg Leu Val Pro Ala Pro Phe Leu
      1           5           10           15
Val Lys Met Tyr Arg Leu Val Asp Asp Pro Ser Thr Asn His Ile Val
      20           25           30
Ser Trp Gly Glu Asn Asn Asn Ser Phe Val Val Trp Arg Pro Lys Glu
      35           40           45
Phe Ser Ala Ser Val Leu Pro Cys Tyr Phe Asn His Ala Asn Phe Ser
      50           55           60
Ser Phe Val Arg Gln Leu Asn Asn Tyr Gly Phe Arg Lys Thr Phe Arg
      65           70           75           80
Gly Gln Cys Glu Phe Ser Asn Lys Leu Phe Glu Lys Gly Lys Gln Tyr
      85           90           95
Leu Leu Cys His Ile His Arg Arg Arg Ala Ser Asn Ser Ser Pro Met
      100           105           110
Pro Met Glu Tyr Gly Lys Ser Ser Leu Leu Phe Pro Ile Ile Leu Pro
      115           120           125
Thr Gln His Ser Asn Val Leu Ala Ala Pro Leu Pro Ser Ser Leu Ser
      130           135           140

```

<210> 1171

<211> 62

<212> PRT

<213> Pinus radiata

<400> 1171

```

Lys Glu Arg Ile Leu Thr Glu Glu Asn Leu Phe Leu Arg Lys Lys Cys
      1           5           10           15
Gly Asp Glu His Val Asp Cys Ser Ala Phe Arg Thr Pro Pro Ala Gln
      20           25           30
Leu Arg Ser Ile Gln Asn Ile Asp Val Glu Thr Gln Leu Val Ile Arg
      35           40           45
Pro Pro Thr Val Gln Gln His Pro Asp Val Asp Ser Pro Arg
      50           55           60

```

<210> 1172

<211> 88

<212> PRT

<213> Pinus radiata

<400> 1172

```

Asp Pro Asn Ala Pro Lys Lys Ala Met Thr Gly Phe Met Phe Phe Ser

```

```

      1           5           10           15
Gln Val Glu Arg Glu Asn Leu Lys Lys Ser Asp Pro Gly Met Ala Phe
      20           25           30
Thr Asp Val Gly Arg Thr Leu Gly Glu Arg Trp Lys Lys Met Ser Ala
      35           40           45
Glu Glu Lys Ala Pro Tyr Glu Ser Lys Ala Arg Ala Asp Lys Glu Arg
      50           55           60
Tyr Lys Glu Ala Met Ala Asp Tyr Lys Ser Gly Pro Thr Asn Val Asp
      65           70           75           80
Ser Gly Asn Glu Ser Asp Ser Glu
      85

```

```

<210> 1173
<211> 106
<212> PRT
<213> Pinus radiata

```

```

<400> 1173
Leu Leu Phe Gly Val Asn Ile Asp Ser Ser Ser Leu Ile Val Pro Asn
      1           5           10           15
Thr Val Ser Asn Met Arg Ser Ile Gly Ser Ser Thr Asp Ala Val Met
      20           25           30
Gln Phe Gly Val Ser Asn Tyr Leu Asn Ala Pro Pro Cys Ala Ser Gly
      35           40           45
Ser Asn Ile Ser Leu Asn Ser Asp Ile Ser Ala Ser Ala Cys Leu Asp
      50           55           60
Glu Ser Gly Leu Leu Pro Pro Ala Glu Asn Leu Gly Gln Met Asn Ala
      65           70           75           80
Pro Thr Arg Thr Phe Ile Lys Val Tyr Lys Gln Gly Ser Val Gly Arg
      85           90           95
Ser Leu Asp Ile Ser Arg Phe Ser Ser Tyr
      100           105

```

```

<210> 1174
<211> 108
<212> PRT
<213> Pinus radiata

```

```

<400> 1174
Met Ala Thr Thr Arg His Gln Arg Ser Pro Asp Ser Ser Pro Arg Ser
      1           5           10           15
Glu Asp Glu Ser Gly Ala His Thr Tyr Ser Asn Gln Asp Gly Ser Val
      20           25           30
Lys Glu Gln Asp Arg Phe Leu Pro Ile Ala Asn Val Ser Arg Ile Met
      35           40           45
Lys Lys Ala Leu Pro Ala Asn Ala Lys Ile Ser Lys Asp Ala Lys Glu
      50           55           60
Thr Val Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Ile Thr Gly Glu
      65           70           75           80
Ala Ser Asp Lys Cys Gln Arg Glu Lys Lys Lys Thr Ile Asn Gly Asp
      85           90           95
Asp Leu Leu Trp Ala Met Gly Thr Leu Gly Phe Glu
      100           105

```

```

<210> 1175
<211> 137
<212> PRT
<213> Pinus radiata

```

```

<400> 1175
Lys Ser Asp Tyr Arg Asp Ser Asp Asp Glu Gly Gly Gly Thr Val Arg

```

```

      1           5           10           15
Glu Gly Lys Asp Leu Gln Thr Ser Asn Phe Ile Asp Tyr Phe Gly Gln
      20           25           30
Ser Asn His Thr Glu Glu Ala Glu Asn Glu His Asp Ala Ser Val Asp
      35           40           45
Thr Lys Gly Pro Leu Glu Ser Ser Asn Glu Val Gly His Pro Thr Thr
      50           55           60
Tyr Pro Glu Ser Ser Ser Leu Ser Ala Gln Gly Ser Glu Pro Arg Val
      65           70           75           80
Phe Ser Cys Asn Tyr Cys Gln Arg Lys Phe Tyr Ser Ser Gln Ala Leu
      85           90           95
Gly Gly His Gln Asn Ala His Lys Arg Glu Arg Thr Leu Ala Lys Arg
      100          105          110
Gly Gln Arg Ile Gly Ala Phe Gln His Arg Tyr Ile Ser Met Ala Ser
      115          120          125
Leu Pro Leu His Gly Ser Thr Glu Ser
      130          135

```

```

<210> 1176
<211> 206
<212> PRT
<213> Pinus radiata

```

```

<400> 1176
Ser Arg Gly Lys Ala Leu Lys Leu Phe Gly Phe Glu Phe Arg Gly Ser
      1           5           10           15
Glu Gly Gly Ser Phe Glu Gly Thr Asn Gly Ser Asp Gln Pro Gln Asp
      20           25           30
Gly Thr Asn Ile Leu Thr Ala Gly Glu Ala Ser Thr Glu Pro Val Glu
      35           40           45
Glu Glu Leu Val Ile Glu Ala Lys Asn Gly Asp Ser Gly Lys Leu Glu
      50           55           60
Asp Val Gly Ser Pro Val Glu Ala Gly Glu Ser Gly Ser Thr Ser Asn
      65           70           75           80
Cys Leu Gly Ser Ser Ala Gln Glu Asn Arg Lys Tyr Glu Cys Gln Tyr
      85           90           95
Cys Cys Arg Glu Phe Ala Asn Ser Gln Ala Leu Gly Gly His Gln Asn
      100          105          110
Ala His Lys Lys Glu Arg Gln Gln Ala Lys Arg Ala His Leu Leu Ala
      115          120          125
Thr Arg Ser Ala Ala Ala Ser Ala Asn Arg Ser Gly Ala Thr Ala Trp
      130          135          140
Cys Gly Asn Ile Asn Gly Asn Leu Tyr His Arg Asn Phe Leu Phe Asn
      145          150          155          160
Asn Ser Tyr Phe Thr Arg Met Gln Val Phe Gln Glu Asp Phe Pro Thr
      165          170          175
Phe Gln Thr Pro Gln Ala Val Ala Ala Pro Ser Ile Pro His Tyr Ile
      180          185          190
Phe Ser Tyr Gln Gln Gln Gln Gln Ala Pro Val Gln Ser Arg
      195          200          205

```

```

<210> 1177
<211> 116
<212> PRT
<213> Pinus radiata

```

```

<400> 1177
Val Pro Glu Asn Ser Lys Gln Ile Ile Asn His Gly Leu Ile Leu Pro
      1           5           10           15
Glu Met Gly Ser Val Asp Ser Gly Arg Glu Gly Thr Arg Ala Ile Leu
      20           25           30

```

Ser Asp Asp Cys Val Lys Phe Glu Cys Arg Tyr Cys Cys Arg Val Phe
 35 40 45
 Pro Thr Ser Gln Ala Leu Gly Gly His Gln Asn Ala His Lys Arg Glu
 50 55 60
 Arg Arg Arg Ala Met Thr Arg Phe Gln Arg Ser Pro Ser Asp Ser Ser
 65 70 75 80
 Asn Tyr Ser Gly Lys Gln Asn Ser Ile Asp Leu Phe Ser Arg Glu Arg
 85 90 95
 Val Pro Gly Ser Ser Leu Leu Ser Pro His Gly Thr Arg Asp His Val
 100 105 110
 Val Cys Ser Asp
 115

<210> 1178

<211> 122

<212> PRT

<213> Pinus radiata

<400> 1178

Lys Lys Ala Ser Glu Trp Gly Glu Ser Val Val Ser Thr Ser Glu Asn
 1 5 10 15
 Ser Asn Asp Leu Asp Pro Pro Thr Tyr Ser Glu Thr Ser Ser Pro Ala
 20 25 30
 Gln Gly Ser Asp Pro Arg Val Phe Pro Cys Asn Phe Cys Gln Ser Lys
 35 40 45
 Phe Tyr Ser Ser Gln Ala Leu Gly Gly His Gln Asn Ala His Lys Arg
 50 55 60
 Glu Arg Thr Leu Ala Arg Arg Ala Gln Arg Met Gly Ser Phe Ala Gln
 65 70 75 80
 Arg Tyr Ser Ser Met Ala Ser Leu Pro Leu His Gly Ser Ser Glu Thr
 85 90 95
 Ser Trp Thr Pro Ser Arg Phe Leu Gly Ile Lys Ala His Ser Leu Ile
 100 105 110
 His Lys Pro Phe Pro Glu Gly Asp Asn Leu
 115 120

<210> 1179

<211> 113

<212> PRT

<213> Pinus radiata

<400> 1179

Met Thr Gln Ala Thr Asn Tyr Thr Ala Gly Thr Ile Arg Asp Asp Gln
 1 5 10 15
 Glu Glu Gln Cys Val Arg Arg Gly Pro Trp Thr Val Asp Glu Asp Met
 20 25 30
 Ser Leu Ile Arg Cys Val Thr Thr Arg Gly Glu Gly Arg Trp Asn Thr
 35 40 45
 Val Ala Lys Phe Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu
 50 55 60
 Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Lys Arg Gly Asn Ile Thr
 65 70 75 80
 Pro Glu Glu Gln Leu Leu Ile Leu Glu Leu His Arg Leu Trp Gly Asn
 85 90 95
 Arg Trp Ser Lys Ile Ala Arg Gln Leu Pro Gly Arg Thr Asp Asn Glu
 100 105 110
 Ile

<210> 1180

<211> 76

<212> PRT

<213> Pinus radiata

<400> 1180

```

Met Arg Arg Pro Gln Arg Lys Lys Lys Thr Asp Ala Glu Asp Asp Phe
 1                               5 10 15
Asp Glu Cys Tyr Tyr Thr His Met Cys Lys Ile Cys Lys Lys Phe
 20 25 30
Val Ser Gly Arg Ala Phe Gly Gly His Met Arg Ile His Gly Pro Val
 35 40 45
Ala Thr Ala Ala Ala Ala Ala Glu Ser Asn Gly Lys Asn Leu Glu
 50 55 60
Pro Gln Arg Lys Arg Ser Arg Ala Glu Glu Ile Arg
 65 70 75

```

<210> 1181

<211> 130

<212> PRT

<213> Pinus radiata

<400> 1181

```

Val Gly Cys Lys Gly Ser Asp Ala Phe Glu Glu Ser Leu Lys His Phe
 1                               5 10 15
Cys Arg Val Cys Lys Arg Arg Phe Ala Cys Gly Arg Ala Leu Gly Gly
 20 25 30
His Met Arg Val His Gly Ala Glu Leu Gly Ala Ile Lys Gly Gly Gly
 35 40 45
Leu Glu Glu Gln Phe Glu Lys Gly Arg Val Lys Glu Pro Ser Arg Ser
 50 55 60
Cys Gly Asp Ser Val Lys Glu Gly Val Gln Asp Glu Val Glu Gly Leu
 65 70 75 80
Asn Ser Met Tyr Thr Leu Arg Arg Asn Pro Lys Arg Ser Trp Arg Phe
 85 90 95
Ala Asp Gln Asp Tyr Ser Phe Ala Phe Gly Gly Val Asp Gly Ser Gly
 100 105 110
Ala Lys Arg Phe Gly Ser Thr Phe Leu Arg Asp Ser Arg Val Cys Glu
 115 120 125
Glu Cys
130

```

<210> 1182

<211> 86

<212> PRT

<213> Pinus radiata

<400> 1182

```

Arg Asn Tyr Leu Gly Glu Tyr Thr Gly Glu Leu Ile Ser His Arg Glu
 1                               5 10 15
Ala Asp Lys Arg Gly Lys Ile Tyr Asp Arg Glu Asp Ser Ser Phe Leu
 20 25 30
Phe Asn Leu Asn Asp Gln Tyr Val Leu Asp Ala Tyr Arg Lys Gly Asp
 35 40 45
Lys Leu Lys Phe Ala Asn His Ser Pro Thr Pro Asn Cys Tyr Ala Lys
 50 55 60
Val Ile Met Val Ala Gly Asp His Arg Val Gly Ile Phe Ala Lys Glu
 65 70 75 80
Arg Ile Ala Ala Gly Glu
 85

```

<210> 1183

<211> 462

<212> DNA

<213> *Eucalyptus grandis*

<400> 1183

acaaacaaac	aaacaagacg	gaacgagatg	aagacggttc	agtcgaagaa	gttcaggggc	60
gtcagacagc	gtcactgggg	ctcttgggtt	tccgaaatc	gccatcctct	gttgaaagaa	120
aggggtgtgc	tgggcacggt	cgagacgggt	gaggaggcgg	cacgagccta	cgaccaggcc	180
gccatcttga	tgagtggcgc	caatgcaaa	acaaacttcc	cgacatctca	aaccacgaac	240
ggcgaccgcc	cgctggccaa	ttccttgtct	tcctcgaagc	acttgcgga	gatcctccac	300
gcgaantcaa	ganatgcagc	aagacgcggt	cgccatccct	cacctgccta	aggctcgaca	360
ctgagaactc	ccacatcgga	gtctggcaga	aggggtgcgg	ccagcgtcag	actcaactgg	420
gtatgaccgt	acagtgcgaa	caaaaatccg	atccattggt	ag		462

<210> 1184

<211> 340

<212> DNA

<213> *Eucalyptus grandis*

<400> 1184

gactccccct	atccccctctc	tttctcccc	tcaagaatca	agagattact	atggaaaagcg	60
aacgctacga	tgagacgaca	gaggggcgac	gaatcaagag	aaggccgcac	cagcagcagc	120
agcagcagca	gcagcggcgg	cagaagcctt	acaggggtat	ccggatgagg	aagtggggca	180
agtgggtggc	cgagatcagg	gagcccaaca	agcgctcccc	catctggctc	ggctcctatg	240
ccaccgccgt	ggcgccgcgc	cgcgctacg	acacgcgcgt	ctctacctc	cgcgccccc	300
cgcgccgctc	caacttcccc	gacctcatct	ggcgcgaggg			340

<210> 1185

<211> 190

<212> DNA

<213> *Eucalyptus grandis*

<400> 1185

cttgggggtg	acatggcgcg	acgtggcgga	ggaaggaggc	gaacggcgcg	tccgaggcgt	60
ccgacgcggt	cttgcgcgga	gtcctatcat	gccatcggtt	caaggagatg	aggatgcgga	120
agtgggggaa	gtgggtggcg	gagatacggc	agcccaacag	ccgggacccg	atctgggtcg	180
gtcctacgc						190

<210> 1186

<211> 473

<212> DNA

<213> *Eucalyptus grandis*

<400> 1186

aaacaaaggt	tgatgatgga	accattctgg	atagcattgc	aaaggttact	ggaattgtga	60
agtttgatct	gcattgctgag	ccagaggaa	gaaaagaa	gattgaggtc	ggaggaaaatg	120
ttgcagggtg	gtttgacctc	ggaccaggta	gaattnggtt	ctgaagctgt	ttttgtccct	180
cgagagcctg	gcataccttc	tgaagaagat	gatgggtacc	tgatattctt	tgcccatgat	240
gaaagcacag	ggaagtcggc	agtaaatgta	attgatgcga	aaaacatgtc	atctgatctc	300
gttgctgtcg	ttgaattacc	ccatagggtt	ctttatggct	tccatgcctt	ctctcgatct	360
gaggaaacac	ttcaggaaact	ggctaaagctg	taggtctcta	catgcacgaa	ttgttgggaa	420
tgcagatgct	gcgaggggag	gcatactctt	ggaaagctgc	tacagttgat	cta	473

<210> 1187

<211> 333

<212> DNA

<213> *Eucalyptus grandis*

<400> 1187

accagatcca	gatgcagagg	tcattgcact	atcgccaaag	acgctcatgg	cgacgaacag	60
gttcgtttgc	gagatatgca	acaaaggctt	ccagagggac	cagaacctgc	agctgcaccg	120
gagggggccac	aactctgccat	ggaagctccg	gcagaggagc	aaggagatcg	tcaagaagaa	180

ggtttatata	tgccctgaga	agacgtgcgt	gcaccacgac	ccttcaaggg	cacttggcga	240
cctcactggg	atcaagaagc	acttcagccg	gaagcatggc	gagaagaagt	ggaagtgtga	300
gaagtgcctg	aagaagtacg	cagtccagtc	aga			333

<210> 1188
 <211> 420
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1188						
taaaaaacat	gcagtctctc	agccactgaa	catggcgctt	gaagctctca	actcgccac	60
cgccgcgcgc	ccctctggcc	acgacgacgc	ggacggccac	ccgtggggca	aacgggaaggc	120
ctccaagcgc	cccgcgcgcg	accctcagga	ccagccctcc	gaggaggagt	acctggccct	180
ctgcctcctc	atgctcgccc	gcgcgcgcgc	ccgacccggc	agcagcggca	ggctccacga	240
gtgctcctac	tgccacaagg	ccttccccac	cgcccaaggc	ttgggcggcc	acaagcggtg	300
ccactacgac	ggcggcagca	gtagcagcgc	cgcccgctgt	gcctcttctc	cagaagccgg	360
cggtcttagc	cacacgactg	tcagccaccg	cgagccgcat	gacttgaact	tgccgcgctt	420

<210> 1189
 <211> 365
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1189						
tgacgcgcag	cgacgtgggg	aagctgaacc	ggctgggtgat	cccgaagcag	cacgcggaga	60
agcacttccc	gctgccgggc	ggcgccggcg	cgacgatgaa	gggcgtactg	ctcaacttcg	120
aggacgtcgg	cggaagagtg	tgccgggttc	ggtattcgta	ctggaacacg	agccagagct	180
acgtgctcac	caagggttgg	agccgggttc	tgaaggagaa	gagcctgaa	gcgcggcgaca	240
ccgtntgctt	ccagcggtcg	accggggcgg	acaagcagct	ntacatcgac	ttcaagccgc	300
ggggccaagc	gcccgcgcgc	cggcgccgcg	cgccgcgcgc	gcccgtacag	atgggtgaggc	360
tgcttc						365

<210> 1190
 <211> 434
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1190						
atcacttcaa	cccatgacc	ttacaaaaac	aaagcaattg	ttagaacat	ggttgctcaa	60
ctgaagaact	tcgatgtcgc	gtacacaaga	ttggaggaga	agaagaagaa	cgaagtgcac	120
cctagctcga	gcactgggtc	gtggatgtgg	aacctagtgc	ccgccacgga	ggatgatgac	180
tcgtggggag	tgagagcctc	cgccgaagac	actagcaaca	ttatggggcg	aaacctggccg	240
ccgaggtctc	acacttgctc	ttctgtaga	agggagttcc	gggtccgccca	agccctcgccg	300
ggccacatga	atgtccaccg	cagagaccgt	gctaagcttc	accaatcaca	attccggccg	360
ctggcgaaac	aaaattcttc	tttcgctctt	tgctctcttc	cgctccctcc	gactctgcta	420
ttccccgaatc	aaga					434

<210> 1191
 <211> 479
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1191						
gaatcgtttc	ttggactttc	ttgagctgct	cctttcgcct	cattttctcaa	gtgcgtgaaa	60
acccaaaaaa	tggtgagggg	gaagactcag	atgaggagga	tagagaacaa	gacgagcagg	120
caagtacctc	tctcgaagcg	tcggaaacgg	ctgctcaaga	agggccttcga	gctctcggtt	180
ctttgcgatg	ctgaagtcgc	cgccatcatt	ttctctccta	ctggaaaaact	ttatgagttc	240
ttcactccaa	gcattgagcag	cataatagaa	cgaatatcaa	ggaaaaacaa	ggacccgggg	300
tgacacgaga	aaactaccga	aatcgatttg	cagaatatga	agggaaacac	tctagacatg	360
gcaaagatga	tcgaactctc	caacgtttcc	aacagtcggc	tctcaggaga	actttcagat	420
acgtgttcag	ttgaggagct	acaatcaaca	cagaacctgt	tagagagaag	cttatccaa	479

<210> 1192
 <211> 310
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1192
 ccctcttctt ctctctctct ctcctctctgt cgcagagctc cgtctgaact cgcagaatcc 60
 acgcgcagag cgaccacaaga gtgtttcaga acagtcgctc catggccttg gaagctatca 120
 actctccac cgccgctctca gcgcgcttcc agttcatgga ggagcccttg agctcccgt 180
 tcttgaggcc cctgaacaag cgcaagcgct ccaagcgccc ccaccaccc cctccgaag 240
 atgagtacct cgccctctgc ctcatcatgc tcgcccgcag cggcgccgcc cccaagccca 300
 accaccagc 310

<210> 1193
 <211> 466
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1193
 tttttttttt tttttattca aaaacaaaat ctcaacttgc ctttcttaat atatatagtc 60
 caaagccctt tggagatcac cttttatcac ctaccaccag tcagataggt ctattgaaat 120
 tgcctggatt ctcgtctctc agcatatgc aactacaaag actcccatat caaagcacta 180
 gctgcatata cacttttaag ctaactaaca agagaattta aaaagaaaat cctcgctgca 240
 ccaaaaaggc tcgatccata tgggacacaa aacaaatagc tcacattggc ataagctttg 300
 gaccattatc aggcattgccc atccctgcag ctaactcagc atcaagctga gtatgtggcg 360
 caggaccatc catttgcctc atacgtttct tggggcgctt cgtcttgaaa tgctcgctcc 420
 tcgtcgcaac attcggaata tatcggtcgc agtgacagca atagta 466

<210> 1194
 <211> 295
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1194
 gccacccaac acacacccaa gaaaattctt agagcctcct tagatatgcc tacagacctg 60
 gacaattcgt ccacagcttc aggggaagct agtgtctcgt ctcttggaat tcagccgctc 120
 ccacaaccac cgccaccgcc ttccaccacc aagaaaaaga ggaatctccc tgggaatgcc 180
 gatccagatc cagaggtgat agctctgtct cccacgaccc tattggccac caacaggttc 240
 gtctcgcaaa tctgcaaca gggatttcag agggaccaga acttgacagt ccaca 295

<210> 1195
 <211> 337
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1195
 tccaccctca ctgcggaagt caaaatcttc tagtgtagcc atattcttga tgaacattca 60
 caccgaacta cgtcggaagt tgcgggtgcc gacgccggcg cagtcgtctt cgccgtcccc 120
 gtgcgagtcg tgcgagtcgg agtctctccg gagccacgcc gcgtgctccg acgaggagcc 180
 ggcgtggcg ctggcttcca gccggcccaa gaggcggctt gggcggaagg tcttcaagga 240
 gacgaggcac cgggtgtacc gtgggtgtcg gcggcggaac aggggcaagt ggggtgtgca 300
 gctccgggag cccaacaaga agaccgggt atggctc 337

<210> 1196
 <211> 450
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1196
 gaatgatgca tgtgatggac cggtaacagg acttgacactg tcaaagtgcc gnacgtctat 60

cggtctgcc	gaaactcacg	gagagagaga	gatggcggag	agagaggaga	aggggaagta	120
cgacgagatg	atgatgaaga	aggggagcga	cggaaggata	gcggaggatga	atccccagcc	180
gaagaagggg	gtgacgtcca	aggttgtgga	ctacattgag	aagctgatcg	tgaagtccat	240
gtacgactcc	ttctctgctc	accaataacct	cgccggcaac	ttcgtctccc	tcgcccagca	300
gaccctccc	gtaccggacc	ttcccgtcgt	cgcccatctc	cctgattgct	tgaatggaga	360
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<210> 1197

<211> 351

<212> DNA

<213> Eucalyptus grandis

<400> 1197

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ctgtgactccc	atcccaactc	ctgcgccttc	gacttcccca	agccgtcctt	ctcgtcgccg	180
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ctcgcgtccc	accacccaaa	gaagcgcgc	gggaggaaga	agttccggga	gacgcgccac	300
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<210> 1198

<211> 359

<212> DNA

<213> Eucalyptus grandis

<400> 1198

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gccaaagcga	agcgcctcca	gcgcgccacc	aaaccgcctc	cgaggagacc	ctacctccac	300
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<210> 1199

<211> 645

<212> DNA

<213> Eucalyptus grandis

<400> 1199

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cgtcttaagt	ggtgctgggt	gcgtcggcac	actcataata	cagtagctgt	aaggaagtgt	600
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<210> 1200

<211> 376

<212> DNA

<213> Eucalyptus grandis

<400> 1200

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ctctattaat	ccagccaaga	tatagagccc	ctcctctctg	ctcgattctg	taattcccg	240
gatactgctt	cagcataatc	agcacagcac	gagtaaccga	tgcgtccact	ggtagctgat	300
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<210> 1201

<211> 461

<212> DNA

<213> *Eucalyptus grandis*

<400> 1201

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attcagccag	agcgcgagga	ggagctctcg	ctcgggtcag	attctggtgg	tatgatgaag	420
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<210> 1202

<211> 447

<212> DNA

<213> *Eucalyptus grandis*

<400> 1202

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gggtttgatg	agatggcatg	gttcatggga	tgcggataaa	aaatggcaaa	gctacttacg	360
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<210> 1203

<211> 454

<212> DNA

<213> *Eucalyptus grandis*

<400> 1203

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gaaccaaaccc	cgcataatcc	gcctttctct	ttctttctct	cttctttctc	ttctttttca	180
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acatacccca	atccccagat	ggcgccgccc	gcctttgacg	tggccgcgct	ggctctgaag	420
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<210> 1204

<211> 352

<212> DNA

<213> *Eucalyptus grandis*

<400> 1204

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gagaagaagg	aagttaaaga	aagggtcgcc	ttcaagacga	aatccgaggt	tgagatacta	180
gatgacggat	tcaagtggag	gaagtacggg	aagaagatgg	tgaagaacag	tccgaatccg	240
aggaactact	atcgggtgttc	ggtggaaggc	gtctctgtga	agaagagagt	cgaacggggac	300

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<210> 1205
<211> 400
<212> DNA
<213> Eucalyptus grandis

<400> 1205
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caggaccaga ctgcgccgat tcagatcatc ccacctggca agacctggag acaccaaatc 180
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<210> 1206
<211> 408
<212> DNA
<213> Eucalyptus grandis

<400> 1206
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tgccggagcg cagagggctc gcaagaacgt gtacagaggg atccggcaga ggccgtgggg 360
caagtgggccc gcgcgatca gggaccccca caagggcgct cgcgtctg 408

<210> 1207
<211> 270
<212> DNA
<213> Eucalyptus grandis

<400> 1207
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accgggagcg ccgtaagatc cgcggcaaga aggcacaggt gaatttcccc aacgaggaag 180
acgccttctc caccatcccc cgggctcacc agaccacgca ccaccacccc cagggtcccc 240
aactaccctc ctctgtatca acccaactgg 270

<210> 1208
<211> 339
<212> DNA
<213> Eucalyptus grandis

<400> 1208
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ataccaaaat cgataaatag cagtttctgc gctttctcag atatgcttaa aatcatatgg 180
ttagaataga tgatcgcaaa cctctgaatg gggaaaactg agagataagc tcggtaagct 240
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<210> 1209
<211> 405
<212> DNA
<213> Eucalyptus grandis

<400> 1209

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gaaagccttc	aagtaactac	tgttaagcca	gagtatcatg	acttctccga	ggaagatggg	360
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<210> 1210

<211> 521

<212> DNA

<213> *Eucalyptus grandis*

<400> 1210

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cgagccagag	ctacgtctct	accaaggggc	ggagccgctt	cgtcaaggag	aagcgctcgg	480
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<210> 1211

<211> 537

<212> DNA

<213> *Eucalyptus grandis*

<400> 1211

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<210> 1212

<211> 399

<212> DNA

<213> *Eucalyptus grandis*

<400> 1212

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<210> 1213

<211> 283

<212> DNA

<213> *Eucalyptus grandis*

<400> 1213

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<210> 1214

<211> 324

<212> DNA

<213> *Eucalyptus grandis*

<400> 1214

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<210> 1215

<211> 358

<212> DNA

<213> *Eucalyptus grandis*

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<210> 1216

<211> 329

<212> DNA

<213> *Eucalyptus grandis*

<400> 1216

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<210> 1217

<211> 346

<212> DNA

<213> *Eucalyptus grandis*

<400> 1217

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<210> 1218

<211> 468

<212> DNA

<213> *Eucalyptus grandis*

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<211> 162
<212> DNA
<213> *Eucalyptus grandis*

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<210> 1220
<211> 354
<212> DNA
<213> *Eucalyptus grandis*

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<210> 1221
<211> 310
<212> DNA
<213> *Eucalyptus grandis*

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<210> 1222
<211> 315
<212> DNA
<213> *Eucalyptus grandis*

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<210> 1223

<211> 393
 <212> DNA
 <213> *Eucalyptus grandis*

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<210> 1224
 <211> 337
 <212> DNA
 <213> *Eucalyptus grandis*

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 aggggtatcta ctgaaagatt tcggtcggtt cctgatgaag gaagtggccg tgatcaatta 300
 gaatatgagg gattcatgat tgcggatcgc ccagggt 337

<210> 1225
 <211> 226
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1225
 tgttggcacc atgtacacac acagtgtggt aaagcaggct ttgggagtgt caagcaagag 60
 aatctgagca atgaactaga tagggtcaaa aaggagaacg acaacttga gattcagctc 120
 aggcacctga gagnaagac ataacatcac tgaaccacag agagctgata atcctagaag 180
 acactcttga aaacggcctc ggatgtgtcc gagaccagaa ggacga 226

<210> 1226
 <211> 415
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1226
 cggaccgcca ggaatgcacg gtggcggtgc ggaatgttcg gccgggggtc ttcggggggc 60
 agcccttctt cgtggcgagg gatccggacg attcggaggc ggaggaggac gacggctacg 120
 ttgtgagtta cgtgcacgac gagcgcaaa gggagtcgag gttctctggt atggatgcca 180
 agtcgcggga gctggacatc gtggcctccg tccggctacc caggcgggtg ccgtacgggt 240
 tccacgggct attcgtgagg gatagccacc tcaaaatgtc ttacgcttca tggggcgatga 300
 tgcagcgtgg aggtacagag attggggtct tttattacag gatattacgt agtctagagc 360
 atgatacaaa gctatatccc accaacatgc cgcagttaaa ttaggtgggg taggt 415

<210> 1227
 <211> 389
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1227
 acatctcagg ggaatatgcag cctccaacat tcatctcagc aggcggagga ggcgctgtcc 60
 caggggctag aacagctcca acagtcactc ttcgacacca ttgccggcgg gccacgacatc 120
 gaaggaaatgc aacagatggc aatcgcttg ggcaaatata ccaatctcga aggctttgtt 180
 cgacaagctg ataacttgn gcaacatacc ctccatcact gncgccggat actgagagtt 240

cgacaagccg	cacgcgattt	tttggatgc	ggagagtatt	atggtcgact	acgagcattg	300
agtactctat	gggcgtctcg	tcttcgaggg	tgcatgatgg	atgatgataa	ctcacgcca	360
acaacaacgg	acctgcaaat	tggttcaggt				389

<210> 1228
 <211> 435
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1228						
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cacgttgctgc	gaaactgcga	accgggggga	gaactccggg	agtgcggggg	tggttcagatt	120
gaactcggcg	tgcccctgac	tttgcgtgag	ttgacgcac	gcctccgag	acgctcaacc	180
tggttgctgc	caaggcgacg	gcgacgcgac	ggcggctgag	gagacaggag	ttggggcctc	240
atagtgctgc	ctcgtgccca	ccgagagcct	ggcgggtgag	ggagctcttg	tgccagatcg	300
agcactcgtg	gaccttcccg	gacataccgg	aggaggtgtg	gctcgcgag	gtcgaggtgg	360
ccggtctgctc	gtcccacgg	gcgaagagaa	agtgtgtgtg	tatagaggcg	agaggagaga	420
gaagagagag	aagaa					435

<210> 1229
 <211> 252
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1229						
gcaatccaga	ccagatgctg	gaagtgatag	cctgtgcgc	gaagacgctc	atggcgacca	60
accgattcat	atgcgagatc	tgcaacaaga	ggtttcaaa	ggaccagaa	ctccagctcc	120
acaggagagg	gcacaacctg	ccttgggaag	tgaagcaaa	accaaaggat	gaaccgataa	180
ggaagaagg	gtacgtttgc	cccgagccga	catgcgtgca	ccatgacgag	ttgagagcgc	240
tcggtgatct	ca					252

<210> 1230
 <211> 326
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1230						
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atttcccata	ccgcgccag	gagatccagt	agggggggcg	tccgnaagcg	gcctcggagg	120
gggtatgcgc	ccgagatccg	agaccgggag	aagaagacc	gantctggct	cgccaccttc	180
gacacgcgc	aggaagcagc	ccgcgcctac	gacgcggcg	cccagagaat	ccgcggctcc	240
aatgccaa	ctaacttccc	cctcggnntc	cgccgcccc	aggtcatggc	caagaccaac	300
tcggtagatg	catcagcgag	tagcgg				326

<210> 1231
 <211> 424
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1231						
cttccatcct	cgtcagccct	tcggctgttg	gatcaggttc	cgaactgtg	ttcctagact	60
tgagccttgg	ttgcagcaat	gatgagcca	gcgggaggga	ttctgtagga	gtcgccttct	120
cgagcaccag	cgaatgtagc	aatgagcccg	aatctcatcc	ggcagctgca	ggaccaacca	180
cttcaagagt	cttttcttgc	aattactgtc	aaagggaagt	tttcagctca	caggcaactgc	240
gtggccatca	gaacgcgcac	aagagagaga	ggacccttgc	aaagcgggca	atgaggatgg	300
gcattgttcc	ttcacagaga	tattccagct	tgccgtcttt	gcctttgcac	gggtctccca	360
ctgtcaggga	tcgggggac	aaagcgcaat	cttccgtgca	ccaggtgcac	caaggcatgt	420
tgca						424

<210> 1232
 <211> 321

<212> DNA

<213> *Eucalyptus grandis*

<400> 1232

atgatgatga	agaaggggag	cgacggagg	atagcggagg	tgaatccac	gccgaagaag	60
ggggtgacgt	ccaaggtgtg	ggactacatt	gagaagctga	tctgtgaagt	catgtacgac	120
tcctctctgc	ctcaccaata	cctcgccggc	aactctgcctc	ccgtcgccga	cgagaccctc	180
cccgccacgc	acctccccgt	cgtcgcccat	ctccctgatt	gcttgaatgg	agaattcgtc	240
cggtggggcc	ccaatcccaa	gtttgccccg	gtcgccggat	accactgggt	tgatggagat	300
ggcatgggtc	atgggatgcg	g				321

<210> 1233

<211> 508

<212> DNA

<213> *Eucalyptus grandis*

<400> 1233

gacgagatga	tnatgaagaa	ggggagcgac	ggagggatag	cggagggtgaa	tcccacgccg	60
aagaaggggg	tgaaggtccaa	gggtgtggac	tacatttgaga	agctgatcgt	gaagttcatg	120
tacgactcct	ctctgcctca	ccaataacct	gcggcgcaact	tcgctccccg	cgccgacgag	180
acccctcccc	tcaccgacct	ccccgtcgct	ggccatctccc	ctgatgtgct	gaatggagaa	240
ttcgtccggg	tgggccccaa	tcaccaagttt	gccccggtcg	ccggatacca	ctgggttgat	300
ggagatggca	tggttcatag	gatgcggata	aaaaatggca	aagctactta	cgctctctgc	360
tatgtgagga	cgtcgaaact	taagcaagag	gagtagctatg	ggggagctaa	attctatgaag	420
attggagacc	ttaaagggtc	ttttgggtta	ctcatggtca	atatgcaaat	gctgagagca	480
aaactgaaaa	tactagatgt	ttcatatg				508

<210> 1234

<211> 503

<212> DNA

<213> *Eucalyptus grandis*

<400> 1234

gccccgatgtc	ccccctcccc	ccccccgccg	agacgtgacc	gatgccgagt	ggttctacgt	60
catgtcctttg	accgcctctt	tctcggcggg	agacgggtatt	cccggggaag	ccctcagcac	120
ggggctccttg	gtctggctga	cgggtgctcg	cgagcttgag	tcgtacaaat	gcgaccgggc	180
caaggaggccg	gagctcctatg	gcattccgcac	catggtttgc	atccccgactg	gtgatggagt	240
ccttgaatttg	gggtcttctg	atgtgatccc	tgaaaaactgg	ggccttgttc	aacgagccaa	300
gtctcttttct	gggtccgatc	tgctccttcc	caagcaaccg	ccaaccgccac	cacctccgtt	360
ccagctccac	catgaccata	gcgacatttc	tttcgctgac	attggaataa	tgcggggcgt	420
tcaagagaat	gatttcgctc	ctcacgatga	ccacgagaag	aaggtcaaga	agaagcagcc	480
gctggtggaa	ggagctggcg	gga				503

<210> 1235

<211> 367

<212> DNA

<213> *Eucalyptus grandis*

<400> 1235

aaaaagtata	tataccctcg	cctatttgat	agtgaaatag	aggcagcaag	ggcgtatgac	60
aagcgaccta	tcaaatgtaa	tggaaagagag	gctgtgacca	actttgaacc	tagtacgtac	120
gatggagaga	tgattgcaaa	agccagcaat	gaaaaatagca	tctatggtga	ccatgggtctt	180
gatctcaatc	tcgggatatc	agcttcttcc	aggggaatgg	tggaaacctt	agagccctcg	240
gacgacatgc	gtcaggggaag	tagtttaagg	gtaggaacct	ctgctgcatac	ctgggggtgat	300
ccatctgttg	aaggtttatc	gatgacatct	ggacaacctc	ctccttgacg	ggtgttttate	360
ctagcgt						367

<210> 1236

<211> 360

<212> DNA

<213> *Eucalyptus grandis*

<400> 1236
 ctccgcgcgtg cgggtcgccg cgacaacagc aacaacctcc tctctctcca cctctctgac 60
 cgggtcgagat cgggcgctag aaccgagcaa aagaagcgag gattgcactt ctcaaaaggg 120
 ccgggggaag ccccgagccg cgggcgcccc cccggcggag ccggccggca agagggacaa 180
 ggcggggggc tccggcgagc acccgacgta ccgtgggggtc cgaatcgagg actgggggcaa 240
 gtgggtgtcc gagatccggg agccgaggaa atctggctcg ggacgtaccc 300
 cacggcgagg atggccgccc gggccacga cgtggcgga ttggccataa agggcagctc 360

<210> 1237
 <211> 539
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1237
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 tctccgacct cctctctcca cgcggccact gtcccgctgc gcgaattcac cccgcgctg 120
 taggagaccg catctctacg cgcggggggc nangcgccgc ccaacggagg atgccagggg 180
 aaggatacaa ttacttcttc ttacttggcc caggataaca gatcaagagc tacacaatat 240
 ctctggagag tatctctttt ttctatgtgc ttgattgat ttatagcaac tcttagaaga 300
 gtgaattatc gcgcgtcaat agaacagggt taggatttca atagatagga tgaaaaggcc 360
 ggaaggttca gtttcaacct tctactaat tagcattcat gatcctattc cttaaatttt 420
 ataaagtc aaactctgta caactctctg tttagaagaa tgttgatgtc tagtgatgca 480
 ggtaaaattg gacgttttag gctgccaaga aaattgtgcg aggcctattt tccggctat 539

<210> 1238
 <211> 520
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1238
 tctggctgtc ctgatatgct tgatgaaggc agatctggaa tttttgaatt caaacctcta 60
 gctacatcaa acttgggtccc cacagaggca aagcaccacg gaagtgaaca ggctgtgaaa 120
 gtttccaggtc aacgtcattc tcaaccattt gcatcactgt ctccagttca gaggatgttg 180
 gctgtctcat cgaaggaaat gtgtctatcg gtaccactc aagcggttcg ctacggggct 240
 agtccacttg ctgaagctga tctgtatgga ttgttaggta ggaaagagca gcccaataat 300
 gtgatgcagg tgacacaaat ggataataaa gggaaatggcc ctccagtcct gactgagaga 360
 ctctctgacg atggatataa ctggagaaaa tatggacaga agcatgttaa gggctgtgaa 420
 tttccacgca gctattacaa atgtacctat cctaattgtg aggtgaaaaa gcttttctga 480
 cgtgctctcg atggacatat tacagagatt atctacaaa 520

<210> 1239
 <211> 489
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1239
 ctccagatgtg ggacaagctg agggagatta aaaattcatt gcttggacct gaattctgata 60
 tcagtgatag ctgcaattgt tgcttaataa ttggggagcca ccaattcacg tcaactgggc 120
 agtgggatgt acgtccagatg atagagatga tccctaaaaat tggatttgaa ggcacatgctg 180
 attttctgtg cacaagcagt tgccgaagct gacatgccta agacagctgc tttgatggag 240
 gtgttagaga ggaatgggtc tgtctcagga gatccaatcc aacgggtggg tgcctactta 300
 ttagaagggc tttagacgag gttggaatca tctgggagca taactctaac aaagctcaag 360
 tgcaaaagac ccaactggctc ggaattgatg tctacatgt ccaactctta tcagatttgt 420
 ccatactgga agtttgccca cgagtcggca aatgtgttaa ttgggggaagc tataaagtac 480
 gagtcaaga 489

<210> 1240
 <211> 306
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1240
 gccacacgtct accncccttgg cagctgaggc agcggcgccg gccgaggagg cagcagtgag 60
 ggcttcgttag tggcaccgct tgtgcccgcc gagagcgtgg ccggtgggga agctctctgtg 120
 gcagatcgcc ggaggagggtg gttgcccgcc aggtctagggt ggccgggtgt tctgtccgcgc 180
 cggcgaagag aaagtgtgct ggaggagagg agagcgtgca gagaggtaga agagagagaa 240
 gagagaggag agagaacgtg aaaggaggca gaagagagag agtgacagca ggggagagag 300
 aggaca 306

<210> 1241
 <211> 366
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1241
 gagcatcttc ttcaccccta cccaaaggat tctgacaaaa tctgtcttgc aaggcagaca 60
 ggcttgacaa gaagtccagg ctccgaattgg ttcacaaatg caagagtgcg tctctggaaa 120
 cctatggctcg aagaatgtga caaagaagag attgggggatg cggaaatgga ctccaactca 180
 tctcccgaca cagccaagcc aaaaaacagga gatatacagt cctccatgga ggaccgggtg 240
 gaagaagtgc aacagagattc aacagctaca cagagatgca gctcaggcca gctcatggac 300
 tcatcattcg accggactcc agatgtcgaa atggcaggcc actctgtggg attcaactac 360
 ctgaac 366

<210> 1242
 <211> 340
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1242
 cttcggcctc gtcgaccacc ggaatggcat gggcgctcgg aacgccggcc tctgtacttt 60
 cgaagggcac ctccctcgca tgtccgagga cgacctcccc taccacgtgc gcgtcacgcg 120
 ctccggcgac ctcgagaccg tcggccgcta cgacttcgcc ggccagctcg actctccgat 180
 gatcgccacc ccgaagatcg acccggtctc cggcgagatg ttccgctcgc tcaagtactt 240
 ccgattctcc aaggacggcg agaagtcccc cgacgtcgag atccccctgg ctgagccgac 300
 catgatgcac gatttcgcat accgaacgct ttgtcgtgat 340

<210> 1243
 <211> 684
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1243
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 ggaagaaagt gctctcgctg tgggaacata ggccataact caaggacttg cacaactttc 120
 atggggcgac caagtctctg tgggctcaag ctctctcggtg ttcaacttga cctatcttct 180
 tctctctctc ctctcatcct agcatctagt ggtctcgctc atccttattc acttgctata 240
 aagaagagcc tcagcatgga tctctctctg tcttctctcg cctctctctc gtctccatct 300
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 tatctctctg atggcctcgc cgcagatcc caggagaaaa ggaaggaggt tccatggagc 420
 gaagaagagc atcgagcatt cttaatgggg ctagagaaga tggggaaaag cgattggaga 480
 ggcatctcca ggaactatgt gaccacgaga accccaaccc aagtcgcgag tcatgcycaa 540
 aaattctttt tccggcaggc cagttctaat aagaagaagc ggcggtccag cctctctgac 600
 atgggtagtt ttcgtaacc atgtcacaaa tccatacatl aattgggcac caaactcacc 660
 gaaagaaaac tcaagatctt ttca 684

<210> 1244
 <211> 329
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1244

cggccccgca	gcttggttcg	cgtacctcag	aaatggctca	aatgggttgc	ggttcctgcc	60
aaagatttga	ttcatatcag	ccaggagcca	aatatgtgca	atgcttatgc	tgcaagacga	120
ttaaactttg	gttggaagag	catctgggtg	gacaagttaa	gtgtggtaca	tgtgcgatgt	180
tgcttatgta	cccgatgggc	gctccagcag	tcaagtgttc	ggcctgccgt	tctgtgacag	240
aaattgggga	gcacaacaaa	aggaccccat	gggcggtaca	gcaagggaga	cttccccctc	300
ccagtacagt	tccttgatgg	gcacacga				329

<210> 1245

<211> 383

<212> DNA

<213> *Eucalyptus grandis*

<400> 1245

ctccaacggc	gcctctcttc	tcctggactc	ctctgagctc	tctccatctc	ctccggctcg	60
gcgcggcgct	cgctcgacgg	cgacgaactc	agggtttcca	tataattcac	ttgaaagaag	120
ctgcagaatg	ccgtggaaaa	caggacttac	cggtctctaa	acggaagaag	ataaggctct	180
gcagctttgt	cgggagagaa	aaaaatctgt	taggcaagct	gttgatgggt	ggggctcccc	240
tgtgtatgca	catcttcagt	ttgtgcaatc	attaaggaaac	gtagggacag	ctctcacaaa	300
gttctttgaa	acagaatctc	caaatgggtc	tcctcgtat	gcctcaatga	gtacaacacc	360
tgagccaate	gcattaacgg	aga				383

<210> 1246

<211> 380

<212> DNA

<213> *Eucalyptus grandis*

<400> 1246

gctcttcgaa	cactttctcc	accctatccc	gaaggattcg	gacaaagtca	tgctggccaa	60
acagacaggc	ctcactagaa	gccagggtgc	gaatttggtt	ataaatgctc	gagttcggct	120
ttggaagccg	atgggtggag	agatgtacac	ggaggaaatc	aagggaacag	aacagaatgg	180
gggaggagca	gaggaaaaaa	caagcaagag	tgaacgcgag	gactcagcat	ccaagtctct	240
tggcctccag	gacaaggccc	caaactccaa	tgagaacagc	accaagagct	ctcaaacaaa	300
ggagatcacc	tcgaggaaac	acgacacccc	tgccatctct	actaatctcg	cttctctcat	360
cgggggaaac	gtccgcagca					380

<210> 1247

<211> 360

<212> DNA

<213> *Eucalyptus grandis*

<400> 1247

gcagccgagt	cgagcaagaa	actaacgaac	gcccggtgtc	attaggattc	ataatccaca	60
agaacaaaaa	aaaaaaggat	catgggaaga	tcccattgtt	gcgaaggcaa	tggcctgaag	120
aaagggccct	ggtctctctga	ggaagacaa	aaagctcctg	attttatcca	gcagcacggc	180
catgggagct	ggatctctct	ccctaaacgt	gcaggtctta	atagatgtgg	caagagctgc	240
agattgagat	ggataaacta	cttctggccc	gacatcaaga	gagggaagtt	ctccccgaa	300
gaagaacaaa	ccatcttgca	tctccaactc	gtgctcgga	acaaatggtc	ggcgatcgca	360

<210> 1248

<211> 351

<212> DNA

<213> *Eucalyptus grandis*

<400> 1248

tttttttttt	tttttttttt	aaagtaaacg	aatttaagat	taaatataat	atggggaaacc	60
cagctagcta	gtcaagtttg	aaaaatgttg	gccaatttct	gtttctttaa	tacaaagtgt	120
gggaaaaaca	aatttacatc	cgctcaaat	tgaggtaaaa	aaaaacccta	tctctccgg	180
ctttgacttg	tcagccgccc	tcaggttgac	ttgaatacca	ggttcatcgc	accggcgggc	240
acaactctct	gcgacgcggg	ctgggagtga	cgatgctccc	cctcgtacgt	caacgatcagc	300
atcggtggat	cgctcggggg	ctctcccaag	tgttctctcg	cggggcaacc	t	351

<210> 1249
 <211> 419
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1249
 gacgagatga tgaatgaagaa ggggagcgac ggagggatag cggaggtgaa tccccacgac 60
 aagaaggggg tgaagtgccaa ggttggtggac tacattgaga agctgatcgt gaagttcatg 120
 tacgaactcct ctctgcctca ccaataacct cgcggcaact tgcgtcccggt cgcgcacgag 180
 accctctccg taccgcacct ccccgctcgt ggccatctcc ctgatgtcgt gaattggagaa 240
 ttgcgtccggg tgggccccaa tcccaagttt gccccggtcg ccggaatacca ctgggtttgat 300
 ggagatggca tgggttcattg gatgcggata aaaaatggca aagctactta cgtctctcgc 360
 tatgtgagga cgtgcgaact taagcaagag gagtactatg ggggagctaa atttatgaa 419

<210> 1250
 <211> 632
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1250
 cccccccgca cgacccggac gccagtcacg attccctcgc cgtcgccgcc gtgaaacgcc 60
 ggagcgcaac cgcaacggac ccgaacggac ccgtcctcgc ccacccgctgc cgaggttgag 120
 agccatgtcg agcgaacgac gcgcgccctc cgcgcgccgc cgcggggagt 180
 catgtctgttc ggggtcaggg tgggtgtgtt ggaccccatc aggaagagcg tgagcctgaa 240
 caaacctgtc gagtacagac agcccccagg cgcggccccc ggcggggcgg cgtcgcgcaa 300
 ggacgacgcy ggagcggcgc cctccggcta cgcgtccgcc ccggaagcgc tccgcgacgg 360
 ctcgaaaggg gggccggcgc cgagcgcaag cgaggagtc cgtggacgga ggatgaaac 420
 cggctgttcc tgcctgggct acagaaagta gaaaaggcgc attggagagg catttcgaag 480
 aactttgtga agactcggac gccgaacccg gtccgcgagtc atgccccaaa atactttccc 540
 cgccggagca accttaacgc gccgtccgcc gccggactta gccttggttg acatcaccac 600
 ccgatacggc cactgggttg tacaatgatg ga 632

<210> 1251
 <211> 202
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1251
 atgcgaaaca tgcctcaaca ccccccaact catgggaagg tgggaagtgg gctgattcgg 60
 aggttaacat gttgaaggat tacgcttcag aggactggat tacaggtgtt gaccgcttcc 120
 ggttgagcct ggttgaattt ctgataagt tgaataagta tgcggagatc tctgttccaa 180
 tgtacgtgct ccttgaaaag gc 202

<210> 1252
 <211> 378
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1252
 gagataaaga actactggaa tacaagaatt aagcgactgc aacgcactgg catgcctata 60
 tatccaactg aggtttgtct gcaagtgtca agtgagaatc aagaaactca taacatgggt 120
 aacttgata ctgcaggcga agataattgt galctctcac aggcagatcc actcgagatc 180
 ccagaggttg attttagaaa actggaactg catcttggtt tctcgtcttt ttggtctaca 240
 ctctctggac ttccctcttg tggctttggg agagaggcaa tgggtctatc tgaatgctac 300
 tgccctccat ttccatcaag ccggtctcct aaacgccttc ggggtttctga gaccocattt 360
 cctgctcttg atgctgga 378

<210> 1253
 <211> 388
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1253
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 aacgagggctg tttttacgca aacttcgggc ataagctgtg ccttgcaatc gtttggtaaa 180
 cctccaaatg ctaaggtgcac ggtcacattc ctctctgac tttgagcagc tcattggcacc 240
 aacgtccaag gaacatttct taaaaaggat gatccaaaag ttactgtctt gattcaacaa 300
 gccgagctgc tcagttccct tgccgtgaaa gtcaatgcag ataacatgga ccagagctct 360
 gaaaatgctt ggaagggtct ccagggaat 388

<210> 1254
 <211> 380
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1254
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 ggccgctgga ggctcttctg gctgagctg acggaaggct cgatcatcaa gaagagcgcc 180
 agcaccagca gcctctcgtc ccaccacctc ctccccctct cctcctcgcc gtcgctcttc 240
 ccttcgctgc cgccgtcgcc ggccgcgggc tcgcccgcgt cgggcgacca ccactacgac 300
 caccacacac accagcagcg cgaccgggac gggtaactgt ccgacgatcc cgccgaaggg 360
 gcctgcgcgt ccgatgcgcc 380

<210> 1255
 <211> 350
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1255
 ccctcatacg gaaatgggta ttctctcca caatatggca atggacctgc atatcacctc 60
 atgccaaact actaccgcgt gggctacagg atctgtgctg gatgcaatc agagatttgt 120
 catggacggg ttttgagttg catgaatgct gtttggcacc ctgaatgttt ctgctgcgct 180
 gcttgccacc tgccaatttc tgattatgag ttctcttatt caggcaatta tcttaccatt 240
 aaatcttgct acaaggaaac ctaccacca aagtgtgatg tctgcagtca ctttattcct 300
 acaaacctgt ccggtcttat tgagtacagg gcgcacctt tttggagtca 350

<210> 1256
 <211> 377
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1256
 tctcaatggg attagcgga aagaagaacca ccagaggagg gattcagaat ttgaagatga 60
 gaggagtaac aagcagacag cagtgtatgt tgatgacacc gagctatccg agatgatgga 120
 taaattgttg gttctgtcata tlaaaggcaa gactcgagat tcaaatgctg atgaatcctc 180
 taaaaaagaa gtaagttaaa ctttacagca gaatagacag acacacactg ctgatggtgg 240
 gaagtttcat aataagaaac caaccacca gcgcaatatg acagagatgg tggatctcag 300
 aactttgtg atctttgtg cacaagctgt ctcttctgac gatcgaagg ctgctaagta 360
 ctatctaagg cagattc 377

<210> 1257
 <211> 651
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1257
 actcgtggcg ctgttttcgag ctttctagct tccggaggag gagggctggt gttgagcgaa 60
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 gtatgacccg attcaccaaa ttggaatgtg ggacgagaac ttcaagcaga atggaaatcc 180
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tacttctcat	ggatcacagg	atactgctgg	caagtagag	caagaacat	cgaaacctta	300
tgaataagg	caaaagacgt	ltgcccacaa	cgtgagagct	gcgcgcaaaa	gcgcgtctgcg	360
gaaaaaggct	tatgttcagc	agctagaagc	aagtcgtttg	aagcttatgc	agttagaaca	420
agaggttgac	cgagctaggc	aacaggggtg	gtacatggct	tcaggagtag	atccagctta	480
tcaggagat	ggtggatggt	taaaattcagg	aatcgttgca	tttgagatgg	agtacgggga	540
ctggattgat	gaacagaata	gacaaatatg	tgaagctagg	gctgctttga	atgatcatag	600
aactgacgta	gagcttcgca	tctctgtgga	aagtggcata	aaccactatt	c	651

<210> 1258

<211> 311

<212> DNA

<213> *Eucalyptus grandis*

<400> 1258

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agaaaggggt	gacgtccaag	gttgtggact	acattgagaa	gctgatcgtg	aagttcatgt	120
acgactcctc	tctgctccac	caatacctcg	ccggcaactt	cgcctccgtc	gcgcgacaga	180
ccctcccgct	caccgaacct	cccgctcgct	gccatctccc	tgattgcttg	aatggagaat	240
tcgtccgggt	gggcccacat	cccaagtttg	cccggctcgc	cggataccac	tggtttgatg	300
gagatggcat	g					311

<210> 1259

<211> 588

<212> DNA

<213> *Eucalyptus grandis*

<400> 1259

cctagctgaa	actattactc	ccactgggtc	tctctctctc	tctctctctc	tctctctctc	60
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aaagctctcg	gcttcaacgt	ctccgatgag	gaagactcag	ccgtcagcga	ccccattact	180
gttgccgcga	acggcgccgg	cgccggcgga	ggcgccgaag	ccacgcgcgt	gggctcgccg	240
gaaggcagcg	tcccggtggg	gggcggcggc	gagcggaagt	acgagtcgca	gtactgctgc	300
agggaaatcg	ccaactcgca	ggccctgggg	ggccaccaga	acgcgcacaa	gaaggagagg	360
cagcagctca	agcgcgccca	gctgcacgcc	agccggaaacg	ccgcgcgtgc	gtcgctcgct	420
cggaaaccca	tcatctcgcc	cttcgctacg	ccgcgcgacc	tgctggccac	cgtggggcgc	480
gtgggtggta	cggggcgccg	gccacactcc	ccgtcctggg	tttacgcttc	gcgtggcgcc	540
ccgcccctcc	aagtgtcgca	cggtgcgctg	ttcacgacgc	gccaggga		588

<210> 1260

<211> 620

<212> DNA

<213> *Eucalyptus grandis*

<400> 1260

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tgtatgccac	aacggtcgga	acctcttttt	ggtgagggcg	ggagacaaac	tatcgctttct	180
tcgacgaggg	tattgacatc	cttcgaacca	ctcgactccc	tctgttctcg	atccggccat	240
ggatgattga	gaaaaagatt	gagaaactgat	gacgatgacg	atcttgtgtg	ttgctgcttc	300
atatttgcat	gctggagaat	clggtcgact	ttcggtatgct	gccctacgaa	gctgcagctc	360
acctcggggt	gattacogat	cagctgggtg	cacgggaagt	tgctcttcgc	gttctccctc	420
cggagaagcc	agggcccgct	gtcgtaagcc	aaggcggtct	cctcggcgct	attgaaagtg	480
cccagccaca	gcctcagctt	cagcgtggag	tccgttgatc	cggcgaccca	tctcccgcga	540
ggcctttgtc	tcaccccgag	aaacctttct	attgcatacat	cacccttcgc	tctctctctg	600
atgttcttcc	tcatggctat					620

<210> 1261

<211> 562

<212> DNA

<213> *Eucalyptus grandis*

<400> 1261
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tctgtctgat catctgggtca tggctctcat cctacattgt gggggccacc acagcctatg 180
atgccaccat atgggcccacc ttatgctgca atatactcac atggaggtgt ttatggacat 240
cctgcaattc ctcttactcc gactcccttg gctgcggaaa ctccataaaa gtcatctgct 300
aattctgata atggactgggt gaagaagtgt aagggtctgc aatgtcaata 360
ggcagtgggg gggatgcaga cagtgtctgac gatgggactg ataaaaagtc atcacagagt 420
gcagactcgg gagactcaag tgatgaggat caatcagggg cagataaaag caggaggaaa 480
agaagcgtg aggaactctc atccaatggc gatggaaaat ctgaagtgtc agggaaaggct 540
gctggggagg tggatgctgt tt 562

<210> 1262
<211> 384
<212> DNA
<213> *Eucalyptus grandis*

<400> 1262
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aagaaggggg tgacgtccaa ggttgtggac tacattgaga agctgatctg gaagtctatg 120
taagactctc ctctgctcca ccaataacct gccggcaact tcgctcccg cccgcagcag 180
accctccccg tcaccagact ccccgctctc ggccatctcc ctgattgctt gaatggagaa 240
ttcgtccggg tgggcccacc tcccagtttt gccccggtcg ccggatacca ctggtttgat 300
ggagatggca tgggtcatgg gatgcggata aaaaatggca aagctactta cgtctctcct 360
atgtgaggac gtgcaaaact aagc 384

<210> 1263
<211> 381
<212> DNA
<213> *Eucalyptus grandis*

<400> 1263
ccgcgccact ccattcgctc atctccgacc tcctctctcc acgcggccac tgtcccgctg 60
cgcgaaatcg ccccgccgtc gtaggagacc gcatctctcg ccgcggcggt gatggcccac 120
gtttcatctc ctgctctagc aacgcatttc aatggaaagta tgctaatgat actaatcat 180
ctggtgaaag tcacacacgt aatggaaagg cagcaggaga tgccagggga aggaatcaat 240
tacttctctg ttactggccc agggataacag atcaagagct acaacaaatc tcaggagact 300
cgaactctgt aatcactctc ctgttttgaga aaatgttgag tgctagtgtg gcaggtaaaa 360
ttggacgttt agtgcgtcca a 381

<210> 1264
<211> 316
<212> DNA
<213> *Eucalyptus grandis*

<400> 1264
ccgagaagag gacccccaa gagaagagg ggaagccagg cctcgccgcg gacacgccgc 60
tgaaccacgt ggaagccgaa cggcagcgcc gggagaagct gaaccaccgc ttctatgcgc 120
tgcgagcggt ggtcccgaa gtgtccagga tggacaaggc gtccctctgc tccgacgcgc 180
tgtctcatat caacgagctc aagtcacaaga tcggcgatct ggagtcacag ttgcagagag 240
agtcacaag ggtcaaacag gaggtcacgc acgcaaccga caacctgagc accaccacct 300
ccgtcgacca tagtag 316

<210> 1265
<211> 356
<212> DNA
<213> *Eucalyptus grandis*

<400> 1265
tcaggctccc acgcgcttcc attcgcgcac ctccgacctc ctctctccac gcggccactg 60
tcccgctcgc cgaattcacc ccgcgctcgt aggagaccgc atcctacgcc gccgcggcga 120

tggcggcgcc	acgaggagat	gccaggggaa	ggaatcaatt	acttctctct	tactggccca	180
ggataacaga	tcaagagcta	caacaaatct	tggagactca	aactctgttaa	tcactctctct	240
gtttgagaaa	atgttgatgt	ctagtgtatg	aggtaaaatt	ggacgtttat	tgctgccaaag	300
aaaatgtgoc	gaggcctatt	ttccgcctat	ttccacgctt	gaaggattgc	cgctca	356

<210> 1266

<211> 360

<212> DNA

<213> *Eucalyptus grandis*

<400> 1266

gcgcgacaga	gacatgggac	gatcccccttg	ctgcgagaag	gcgcacacca	acaagggcgc	60
gtggaccaag	gaagaggacc	agcgccctcat	cgactacatc	cgctccacgc	gcgaagggttg	120
ctggcgctcc	ctccccaaat	ctgcggcgctc	tctcaggtgc	ggcaagagctc	gcaggtctcag	180
gtggataaac	tacctccgccc	ccgacctcaa	cgcggaactc	tccacgagga	agaagacagag	240
ctcatcatca	agctccacag	cttgctcggc	aacaagtgtg	ctctgatcgc	ggggagatttg	300
cccgaagaaa	ccgaacaaga	gatcaagaac	tactggaaca	cccacatcaa	gcgcgaagct	360

<210> 1267

<211> 375

<212> DNA

<213> *Eucalyptus grandis*

<400> 1267

cgcccccccc	tcctcgagat	ccagcgctgc	cgtcacttcc	agtcaagggg	taccttgccc	60
gcaacagcat	ttccgagat	gacccgcgaa	ggcgtaactc	aatccccgca	gaatacttta	120
ctatgggctt	tactctctct	gctccccatt	accctcccat	ctctccacgtg	caccgctcca	180
cacaactccc	tggtgtgagc	caggctcggc	ctctgggtga	gtccaaaagg	gacccaagaa	240
agaagtacca	atgtgcgccc	tgccccgctg	catcttgccg	ggcttacaat	ttaagagccc	300
acatggcaac	gcattgacccc	aacaggctga	agccccatgt	ctgcgcccat	cgtctcttgcg	360
gcggtctctt	cagca					375

<210> 1268

<211> 567

<212> DNA

<213> *Eucalyptus grandis*

<400> 1268

gacgagatga	tgatgaagaa	ggggagcgac	ggagggatag	cgagagtgaa	tccccgcgcg	60
aagaaggggg	tgacgtccaa	ggttgtggac	tacattgaga	agctgatcgt	gaagttcatg	120
tacgactcct	ctctgctcca	ccaatacctc	gcccggcaact	tcgctcccg	cgccgacgag	180
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ggagatggca	tggttcatgt	gatgcggata	aaaaatggca	aagctactta	cgtctctcgc	360
tatgtgagga	cgctcgaact	taagcaagag	gagtaactatg	ggggagctaa	atttatgaag	420
attggagacc	ttaaagggct	ttttggttta	ctcatgggtca	atatgcaaat	gctgagagca	480
aaactgaaaa	tactagatgt	ttcatatgga	acagggacag	gcaatactgc	actcgtatat	540
caccatggaa	aactgttggc	gctttca				567

<210> 1269

<211> 567

<212> DNA

<213> *Eucalyptus grandis*

<400> 1269

tcgccaccta	atgcattgac	tgaatctgca	gttgccacca	ttagacccaa	aacggtgagg	60
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ggaaacagcaa	ccggcaattc	caatgataag	gctttaaagt	cagatgaaaa	gctacacgta	180
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ggaagcttca	atatggctca	ccatcaaa	ttgtcaggtg	ccgaagcacg	tgttaaatct	300
caactgcagg	acaaaaaaca	ttcgagatcc	cagcctattg	gaaatctcca	tcggagtgtc	360

tcttcacaaag	cgatatatgga	tgggacaagt	gaacccttga	gattggcctc	ccagaacatg	420
gaagaagaca	cgagaacttc	accggccttg	aacatggatc	gcctctctta	cgatggatat	480
aattggagaa	aatatgggga	aaagcaagtc	aaggggaagc	aataatcctag	aagtactat	540
aaatgcacac	acccaaaactg	cccgggtg				567

<210> 1270

<211> 325

<212> DNA

<213> *Eucalyptus grandis*

<400> 1270

gcgggggtgta	cgctcgggaa	ggcgcccaacc	cgctccacga	gccggtcgcc	ggggaccact	60
tgttcgacgg	cgacggcatg	atccacgccc	tccgggtctc	cgcgggctca	gtgagctacg	120
cttgccgggtt	caccgagacg	caacgcctga	tccaggaaac	gggcctcgcc	cgccccctgt	180
tcccaaggc	catcgccgag	ctccacggcc	actcggcat	cgccggctc	atgctctctt	240
acgcccgccg	ctcttcggc	ctcgctgacc	accgtaatg	catggcgctc	gcgaacgcgg	300
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<210> 1271

<211> 365

<212> DNA

<213> *Eucalyptus grandis*

<400> 1271

cacaggcgcg	atcgggccaa	gcgagcgctc	ccccgggaa	ttcagaacc	agccgcccgc	60
ccccgcgcgc	ggcagccgc	gtctccggcg	ccctctccg	gcacctccga	cgccgcccgc	120
gtccggagca	ccctcgaccc	ttcgattccg	aggctggctc	gtgaggctc	gaggcgacgc	180
gaattgttat	cgatagctat	gcagagtcga	cttgctgtga	atggctgtcg	aagcattctt	240
ctttatccaa	gaggggctac	aaatgtttcg	tgtgcattat	gtaacacaat	aacctctggt	300
cccttctctg	catatgtagg	tgcagatatg	gccacgctta	tatgtggagg	ttgcaggaca	365

<210> 1272

<211> 365

<212> DNA

<213> *Eucalyptus grandis*

<400> 1272

accgtgccc	cgatgcaaca	gcattggatac	caagttctgt	tactacaaca	actacaacct	60
gaatcagcc	aggcactctt	gcagaaaagt	ccaacggtag	tggactgccg	gaggaacgat	120
gaggaaacat	ctgtgtggcg	ctggcccgctg	taagagcaag	aattcgtatg	cagccacggg	180
ggcactgttt	cacaacacgg	gagtagctga	atctcttcga	gctgattgtg	ctgggtgattt	240
gaaaaccgcc	ggaaccacca	tcttgaggtt	cggttcagat	tctcetaatt	ggggtcaatc	300
tgagctcca	gtgccaaagta	ctataaacgg	atttcttgat	ctggagcgaa	caattccatg	360
ttctg						365

<210> 1273

<211> 328

<212> DNA

<213> *Eucalyptus grandis*

<400> 1273

aacaaatcag	nggaagaaaa	tatgcagcat	ttgaaggagc	aagctgcgaa	catgatgaag	60
aagatcgagc	tcctggaaga	ttcaagaagg	aagctcctgt	gtgaaggctc	aggatcatgc	120
tcgatagagg	aactgcaaca	gatagaaacg	cagctagaac	ggagtgttat	cagcattcgt	180
gctagaaaga	ctcaggtctt	caaggagcag	attgacaagc	ttaaagagaa	ggagaagatg	240
ttgacagctg	agaatgcaat	cttaactgag	aagtggtgaa	tcaagccccc	acaaagagca	300
aatgagtcca	gggatagctc	acttctca				328

<210> 1274

<211> 390

<212> DNA

<213> *Eucalyptus grandis*

<400> 1274

cttaccgagc	actcccctcc	tgattctaac	tgcgtccatt	tgcgtggtag	cagtcacatca	60
ttggcttaata	agcctaaata	cagagatatac	caagcaagag	aagccacaag	tggttcacatc	120
cgccaacact	cagatgaaga	tgatgctgcg	acagtggcag	atccaagcga	acagagcaga	180
tatcctactg	atcccaagcg	aattagaagg	atgggtttcca	atagggagtc	tgctagaaaa	240
tcacgtaaaa	ggaaaacaagc	acacttagcc	gaacttgaaa	tacaggctga	ccgacttaga	300
ggagaaagtt	ctactttggt	taagcaacta	ttagatgctg	cacagcacta	ccgccatgct	360
gatacaata	atcgagtgc	gaaatctgat				390

<210> 1275

<211> 384

<212> DNA

<213> *Eucalyptus grandis*

<400> 1275

gaattacacc	caacaaaacc	aaaagagatca	taattcagga	tcacccctgt	ttagttaagc	60
aagaataatt	ttcccctccc	ttttctcttt	ttgagccctt	tagagttaca	tgctctgggt	120
agcaatgacg	gggaactttg	gggtggggctc	aaactccatg	gaagaggcgt	ggaggaagag	180
tccttggaat	gctgagggaag	acaagttaact	cattgagtat	gtgaagtgtc	atgggggaag	240
aagatggaac	tctgtagcta	ggctcacagg	gctcaagagg	aatgggaaga	gctgtagatt	300
gaggtgggtg	aattacttga	ggcctgacct	gaagagaggt	cagataacct	ctcaagaaga	360
gagcgtcatc	ctagactccc	gcta				384

<210> 1276

<211> 382

<212> DNA

<213> *Eucalyptus grandis*

<400> 1276

gtcgaaccgag	tggaagagag	gttggccctt	ccgatctggt	caactcgcca	ccctctgcga	60
taagtgcggg	tctgcatttg	aacaggccac	gttttgcgaa	gttttccaact	cgaaggactc	120
cggtatggag	gagtgctgtt	cctgtgcgaa	gcgcctgcat	tgccgatgca	ttgcttcgag	180
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aggactctctg	cctatcgcaa	gtgatgagag	gcctagtgtg	tttggcatga	ttaatgttcc	300
tactggtgaa	ctgcaatctc	gtaccacaga	caaccatttc	gatagcgacg	aggttgataa	360
actgaagctt	attcgattga	ga				382

<210> 1277

<211> 367

<212> DNA

<213> *Eucalyptus grandis*

<400> 1277

ataagatcgg	atctttcctg	ctttggcgac	gccggaaacc	cgaattcagt	gccccaaacg	60
tatgtcgagc	accgacgcac	cgaccgggaa	gttccgatca	tgcccggtga	gatgtttcaa	120
gagccggagt	gcgcgttctc	cgactccgtc	cgccggtacc	tgctgtcgga	ggactccgag	180
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gtgatctcgt	ggagctccag	cttcagcagc	ctgtaccctg	gcctgaccca	gaactggggc	300
gagttgccgc	tcaaaagaaga	tgaccgcgaa	gacatggttc	tctacggcgt	ctccgcgacg	360
ccctcac						367

<210> 1278

<211> 384

<212> DNA

<213> *Eucalyptus grandis*

<400> 1278

cacgctcatc	ggtctgcgag	aaactcacgg	agagagagag	atggcggaga	gagaggagaa	60
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tcccacgcgc	aagaaggggg	tgacgtccaa	gggtgtggac	tacattgaga	agctgatcgt	180
gaagttcatg	taagactcct	ctctgcctca	ccaatacctc	gcgggcaact	tcgntcccg	240
cgccgacgag	accctccgc	tacccgacct	cccgctcgtc	ggccatctcc	ctgattgctt	300
gaatggagaa	ttcgtccggg	tgggcccaca	tcccaggttt	gcccgcgtcg	ccggatacca	360
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<210> 1279

<211> 368

<212> DNA

<213> *Eucalyptus grandis*

<400> 1279

cacggcgccg	ccgcccgggt	tcttggggcg	agggccgtgc	cgatgaaaca	ggcaggtctc	60
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cgccagatcc	ggctaccocaa	gaacccgacc	cgctctggcg	tggcaccctt	cgacacggcg	180
gaggaggccg	ccctcgcccta	gcacaaggcg	gcgtaccggc	tgcgggggtga	tttcgcgcgcg	240
ctcaactctc	cgcacctcaa	gcacaaggcg	tcgcacatcc	agggcgactt	cgccgactac	300
aagccgctcc	attcctccgt	ggacgccaag	ctccaggcca	tctgccagga	catggccgag	360
aaaccagc						368

<210> 1280

<211> 341

<212> DNA

<213> *Eucalyptus grandis*

<400> 1280

gtcaactcgc	tgctcgagct	gcacaagctg	ctggcccgcg	cgggggcgat	cgagaagggtt	60
ctggggcggtg	tgccggcaggt	ggccgcggcg	atcgtagcgg	tggtagagca	ggagggccaac	120
cacaaaggcg	cggtctctgt	ggaccgcttc	aacgagtcgc	tgcaactacta	ctccaccttg	180
tgcactccc	tggagggtcg	cgccagcagc	caggacaagg	ccatgtcgga	ggtctacctc	240
gggaagcaga	tctgcaacgt	ggtggcgctg	gaggggcgccg	accgggtcga	gcgccacgag	300
accctcgccc	agtgggcggt	ccgcctcgcc	ggcgccgggt	t		341

<210> 1281

<211> 295

<212> DNA

<213> *Eucalyptus grandis*

<400> 1281

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acatggatga	gttccctgaag	aacatagga	cagctgagga	gagccaaacta	cagctacaag	120
acatggcgcc	ttcttggtat	ggagggggaag	gaggtggtca	agtaggggaat	ttgctgagac	180
aggggtcatt	gactctgtgc	cggactatta	gtcaaaaaac	agttgatgaa	gtgtggagag	240
aattattcaa	agagacggag	gatgtgaaag	aaggagtag	agaaggaggt	gacat	295

<210> 1282

<211> 365

<212> DNA

<213> *Eucalyptus grandis*

<400> 1282

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tatgcaaaat	caatgacacc	ttatcaaggt	ttaccaaagt	ttgaaacaaa	ttatcacacac	120
ggcctgaggg	atccatgaaa	tcacgcaggc	aaaaccccg	gctcattttc	acgactgcct	180
acctgctcgc	gggggttatt	caaagcctcg	aataccttag	tgcgaagacc	tgagaattcc	240
atcaatgctt	taaaaaacgc	aggcagggcg	ttcttgaggg	ggttcagtcg	catggccttg	300
tggaactcga	cgaaaacgcg	atacttgccn	ttcacatcgt	ccaacccgtt	tttnagggcc	360
tcgat						365

<210> 1283

<211> 428
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1283
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 ctcttcgcgc ccacgcgcctg cccctccggc ctctccact tcttcccctg ctccccatt 120
 gccaaacgcc ctgcgcgcct ctgcgcgcgc tgcctgtatc tctgctgcgt ccgtggactc 180
 cggcgcgcgc agccgcctatg ccgagtcggc gaaattgagg cagcgcgcgc gccgcgcggag 240
 gccacgcgca gccacgctgt gggcccgggc ggccatctcg ggggtcgggt acgtccccag 300
 ccatatccg gtcttctgtg tgggctccgc gagctcgac acccaactgc cgttgttctt 360
 gcgcgcgacc ccccggtaca cgggggtggc ggtctccttg aacacgacc gcccgcgccg 420
 cttcttcg 428

<210> 1284
 <211> 532
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1284
 ggaaaagaga aggcagcttt cccgtataaa acccaaaacc ctccaaattc tcccccaat 60
 tctccagcca gggaaaggcg agggcgcgga cggcgacggc gacgatcatc ccatctccga 120
 ccagctgac ctctccgctcc atcgtcgtca tgtacggagc ggcggcgagg tggagccgct 180
 acgagggaca ggtcttcgag cagcgctgg tggcggtggc ggaggactgc ccgacccggt 240
 ggcagctgat cgggaaccgc ctgaacccgt ccgcgtcgca agtgttcgag cactaccaga 300
 ggctggtgga ggacattgac gcgatcgagt cggggcgggg cgagcgcgcg agctaccgag 360
 acgacccccc ggcgagctgc ggccagattg ccttcgagac gaagcccgag atcaaggagg 420
 cgggaagaaa gaaggggcaac ccgtggaccg agggaggaca caggttatct ttgctcgggc 480
 tgcagaccta tggcaagggc gactggagga gcatctcgag gcaatttgtc ct 532

<210> 1285
 <211> 349
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1285
 aaagtcccg gatgcgcgca cgcgaattcc cctctcgaat gcgctcggaa ttcgagcgat 60
 gatcgaggcg gcgaccaacc agatcccgcc gccgcgcgc cgccgcgagc cgcgagcaagc 120
 cgcgcgcgc gccgcgcgca tccgggtccc cgaactccgc tacaacgcgc tcagggtggg 180
 cgcgctcttc cagcgctgtg caagaacact cgcacccatc ggcaaggccc cggccctgtc 240
 ggcatcttgc ggtacttcca tggagtctct gaactcgtgc ctctgcctcg ccagaggcat 300
 tgactatgag gtgcggaaca atgaggttct gcccaagct cagcaattg 349

<210> 1286
 <211> 350
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1286
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 ctcgatcgcc gacgtcgccg tccgttcggc ttctccgtag ctcccgctcc tcccggcttt 120
 catggaggct aaggtgatgg aagacgctag caagtcgag gctcactcca tatcggtcgc 180
 ggcttcgtg gaaggtggag tccaagaggg ctgcgaggat gcttgcagca tctgccttga 240
 agctttctgc gacagcgaa catctacggt gaccacttgc aagcagcag atcatctcca 300
 gtgcattctc gagtgggtgc agaggagttc acaggtgcc atgtgttggc 350

<210> 1287
 <211> 344
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1287
 gaaggttgga acatctgggt gagcaggccc ttgtcctgca aacagatgca tgtatgcttc 60
 ataatctctat agatatggaa atgtcactgt acactgatca tcaatgtggg aaagaacaca 120
 tccccgtctg aactttgcag attttacaat cacataatga tgaagtgtgg cttgtgcaat 180
 ttccacataa tgggaaatat ttagcttctg catccaatga tcgatcagca atcatttggg 240
 aggttgatga gaatggcagc gtctcattga agcataaatt gactgggtcac cagaagccga 300
 tttctctctg ctgttggagt ccagatgacc gacagcttct cact 344

<210> 1288
 <211> 359
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1288
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 aggcaaaact tcttatctca gaggctaaaa gatgttccac ccatggcctc ttaactctgat 120
 ccagatgaac cgtggagaaa caaaatcgaa gtctcatcaa aaggatcctg attgacctaa 180
 gaatgacaag gcaaccattc ttacgggaca aatccagggt ctgaaggatt taactacgga 240
 agttaacaaa ttgaaagctg aatgtgcagc tcttattgaa gaatctctgt agctgatgca 300
 ggagaagaat gagctcagag aagagaaatc atctttaaaa tctgaagtgt aaaaacttta 359

<210> 1289
 <211> 381
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1289
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 accaccacca ccaccaccac caccacctta tactgtacaa ataactccctt ggctctcgcc 120
 gttatagcct cttaactcaaa aatcagtttt tactcctttt tgttgcgtag tctgtatgtt 180
 gggccagggtt ttctattcgg tatatgtaga gaagtcaagt ggcgaaaccg agcgtcgagc 240
 ggctggccat ggcttccctc tcttctgtag cttccgcgag gaaggacgcg gatcgatca 300
 agggggcgtg gagccccgag gaggcagagg cgtcgagag gctgggtccag agctacggcc 360
 cccgcaactg gtcctgtatc a 381

<210> 1290
 <211> 330
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1290
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 ctctcgaaag ccaaaacctc tcatctata ttgcccctct ctctccggt catccctcgc 120
 aaaaaccagac ccccggtaca gcccccgaag aaggtcgagc aagcaagatg gcggaagagc 180
 accggtgcca ggccccgcgc ctctgcgaga caaactcgcg ctctctcgcg agccccgcga 240
 cgcaggtatt ctgtctcaag tgctaccgag acctccagct caaggagcag cagtctctca 300
 acgccaagct cgtcttcaac cagacctgt 330

<210> 1291
 <211> 296
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1291
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 agaacaaaag aaaaaagat catgggaaga tccccatgtt gcgaaggcaa tggcctgaag 120
 aaaggccctt ggtcttctga ggaagacaag aagctccttg attttatcca gcagcacggc 180
 catggagctg gatctctct cctaaacgtg caggtcttaa tagatgtggc aagagctgca 240
 gattgagatg gataaactac ttgtggccgg acatcaagag agggagtgtt cccccc 296

<210> 1292

<211> 355
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1292
 gccaaagaccc tggccgggcca caaggccgcc atctccgccg tcaagtcttc gccggagggc 60
 aacctctctgg cctctctctc cgcgcacaag accctccgcg cctactccac cgctctccctc 120
 gccccgcctcc acgaacttcca cggccactcc cagggcgctct ccgacctggc cttctccggc 180
 gacacccgcc tctctcgccc gcctccgacg acaagaccct ccgctcttgg gacgtcccca 240
 cgggggaccc cctcaagacc ctccacggcca caccacttac gccttctgcg tcaacttcaa 300
 cccccactcc aacctctctg tctccggctc ctctgacgag accgtccccc gtctg 355

<210> 1293
 <211> 362
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1293
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 ccatccaagt cgcgggtccc cgcggcagca gcttctctgg ggcccggtct gtccccgggg 120
 cgcagccgctc gggctccgct ggccgacgac acgacaagca ctaccggggc gtgcgcccggc 180
 ggctgggggg aagttcgccg cggagatcgc cgaccgacgc cgcaagggga cgcgctgtgtg 240
 gctgggggacg ttcgacacgc cgggtggggc cgcgaaggcc tacgacccgc ccgcgtttag 300
 gctccgcggg agcaaggcca tctggaactt ccgctcgag cgggggacgc acgagccgac 360
 gt 362

<210> 1294
 <211> 360
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1294
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 ccgatgcgga tggcgatgat ggaccggatt agcccgtaga gaggaaatcgg attgcttttc 120
 cggaacaaga gatttccgca cgcacgacac gacgacgacg acgaatatagg aggaaaaaaga 180
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 aggcgcgtct gtgccgcgct tgcgacgaga aggttcatct gtgcaacaag ctggcgagtc 300
 ggcattgtgc cgtcgggctc gccgatccta gtgaggtcca acgttgcgat atatgtgaga 360

<210> 1295
 <211> 344
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1295
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 tggcccggaac ctccccccgc gcagcatcgg cctcccgttc atcgccgaaa gcctcgactt 120
 cctctccaac ggggtggaagg gccaccggga gcggttcatc ttccgacgga tgcgccgcta 180
 ctctctccac gtcttccaaga ctctccctct cggggagccg gccgccatct tctgcccgc 240
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 ctccgtcaac aaggttcttc ctctccacac ccagacctcc tcca 344

<210> 1296
 <211> 287
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1296
 gttactacga gagacaaacc aactttgctc ctgcctccat caagattgac aacctgggtg 60
 cccttggtct gttctctctt gcactgacga cgttcattct ctccctctac aacgtcaatg 120
 cgcgtgacgt aaccaccccc aatgttgtgt tggcatggcc atctctctgt gaggccttg 180

tcagctctctc	gctggcatgt	gggagtttcc	tcgcggcaac	acctttggag	caacgctttt	240
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<210> 1297

<211> 557

<212> DNA

<213> *Eucalyptus grandis*

<400> 1297

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gacacatggg	tcgtctacgc	cagcaagaag	aggccggggg	ccgatgatgc	cgatggcggc	120
gaggagcgga	tggttggtggc	caagaaacag	atgatctccg	gccccgtggc	gggggtgtgg	180
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cggccgcggg	gggtccagggc	cggacccaag	tgctctactt	cgagtcggtc	tcgaaacccga	420
cgctgacggt	cgccgacata	cggagctctt	gcccgtgggc	ccacgacaag	ggcggtgacgg	480
tggtcgtnga	caacacgttc	gcgccgatgg	tcctgtcccc	ggcccgggctc	ggcgccgacg	540
tggtgtgtga	caacatc					557

<210> 1298

<211> 500

<212> DNA

<213> *Eucalyptus grandis*

<400> 1298

gggcatacta	aggcaatcga	ttctgtgtgt	tgggattcta	ctggcgattt	aatgtcgtct	60
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catgaattga	gctgcgaatg	aaacaagccc	cactcctgcg	tgttccaccc	aacttatctt	180
tcacttttgg	tgattggctg	ctaccanacc	ctggagctct	ggaatatggc	cgagaacaag	240
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ggcctgggtg	cttcagctag	tcacgacaag	acagtgaagc	tgtaggaagt	atactttggc	360
atctccaggt	atttttccca	agcactcaga	ttggaagact	gaaatcgctg	ttcccatcaa	420
atgcatgta	tttgttcctt	gtatcaagtt	gcctcagtac	gcccgattgg	tgtccgtctc	480
actgatacta	atttatagct					500

<210> 1299

<211> 444

<212> DNA

<213> *Eucalyptus grandis*

<400> 1299

gagacacacc	ccgcaatcta	ccggaggcgc	cacgaccttg	tgagcgcacg	ggcttgctcg	60
ttcgatcttg	agtcatgagg	ctcctgtgcc	tgctcgcgtt	gatcccgctc	gtcgcagcgg	120
agtgccagtg	cgagagcgat	cccgaggaac	gcaacaggac	ccggggccctc	aagtaacaag	180
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ggaagaccgt	cccggctctg	caccgcggga	ggagatctct	cttcatactc	aaggccttcg	300
cggccggggg	gatcctgtcc	accgggttca	tacacgtcct	cccgagaccc	ttcgagaact	360
tgacgtcgcc	gtgcctgagc	gagaccctgt	gggggggattt	cccggttcg	gggttcgtgg	420
ccatgctcgg	cgcactcggg	acgt				444

<210> 1300

<211> 547

<212> DNA

<213> *Eucalyptus grandis*

<400> 1300

ggaagctcta	gggttgtgaa	gtacattctc	gaatctggca	aagtcgatgt	aaataggggt	60
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gtggaggttg	tcaagctctt	gcttcacgca	ctcgcgatg	ctaattgcat	tgatggcaat	180
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gagaagccga	ttgccgcacc	gcaagcatcc	aaagagggaa	gcgaaaaagaa	agagtatcaa	360
ttctcgtgtg	atatctctct	gcctgacata	aattgttggga	ttacacgtac	tgtatgagttc	420
agaatgatg	ctttcaaaagt	aaagccttgc	tgcggggcat	actcccatga	ctggacagag	480
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<210> 1301

<211> 483

<212> DNA

<213> *Eucalyptus grandis*

<400> 1301

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gattactcgt	acaaaacgta	aactcagctc	tgccaatatt	cccatggagg	gggaatctta	180
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catgggtggc	tcctgtgttg	gaagctctag	gggtgtgaag	tacattctcg	aalctggcaa	420
agtcgagtga	aatagggcct	gtgggttcgga	caaggtcact	gccccttact	gtgctgttgc	480
cag						483

<210> 1302

<211> 368

<212> DNA

<213> *Eucalyptus grandis*

<400> 1302

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tggggaaaaa	attcaatatg	agaagatggg	taaaattttg	tgcaattcat	tttcagggat	180
gctgcggttg	tttgcatttt	ggcgacgtgc	ttgttcttaa	tcttgacagt	atggttttga	240
gaactctttg	gaccacccgc	caaggacctg	gcccgaggga	cagtcacagt	gctgttcttg	300
tggggcacag	gatggttgtg	tttgggggta	ccaacggctc	tagaaaggtt	aatgaccttc	360
atgtaactg						368

<210> 1303

<211> 348

<212> DNA

<213> *Eucalyptus grandis*

<400> 1303

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acagcgccca	cgacttcggg	tacctgggtc	aggccctcac	ccgcgcgcag	ctccccggcg	120
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agcaactcat	cggtgttcgc	cacagcctgc	acggcggggt	ggaccgggtc	gccgcgcgcc	240
tggagctgga	ccgggcggtg	ggcaagtgc	accaggccgg	ttccgacagc	ttgctgacgt	300
ggcaagcgct	caggaaagatt	aggggacgtc	acttcgccaa	cgacgcag		348

<210> 1304

<211> 349

<212> DNA

<213> *Eucalyptus grandis*

<400> 1304

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acatggcgcc	ttctggtaat	ggagggggaag	gaggtgggtca	agttagggaa	ttgctgagac	180
agggggtcatt	gactctgtcg	cgactattta	gtcaaaaaac	agttgatgaa	gtgtggagag	240
aattattcaa	agagacggag	gatgtgaaa	aagggagtag	agaaggaggt	gacataaatt	300

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<210> 1305
<211> 354
<212> DNA
<213> *Eucalyptus grandis*

<400> 1305
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caggaggtgc gatctcccca tacacacggc caacgagcat acccagaagc acagcaggtt 240
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<210> 1306
<211> 513
<212> DNA
<213> *Eucalyptus grandis*

<400> 1306
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catagacttc caaattgctc agggcaccca gtggaccact ctctctcaag cgcttgctgc 180
aagacctagc gggccccctt atgtgcggat tacagggtat gatgaccggt tcaaacagga 240
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gccagacgag agtggtgaca tcaaccaatc aagggtgggg ctactaagga tgggtgaaatc 480
gctttctcgc aaagtgatca cattgatcga gca 513

<210> 1307
<211> 348
<212> DNA
<213> *Eucalyptus grandis*

<400> 1307
agcagctccg cgtcgtgccg gggcagcagc agagccccgg gagcgtcgag tcgctgtctc 60
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cgatggggca gatggtgcgc tctctcagga acctgcagct cgacaaagtg aagtccatgc 180
cttgcggcgg gtccacttcc gggctgcgga gggcctccag gatccgacgc ggggtctaca 240
gcattccccc gacgcgcgca caatccaccc cgacggcgcg cgggctgggg tgctctggatt 300
cctgggagag ccttaccgag gaagaaccgg cgatggagaa ggtggaat 348

<210> 1308
<211> 345
<212> DNA
<213> *Eucalyptus grandis*

<400> 1308
ggaaaaagaga aggcagcttt cccgtataaa acccaaaccc ctccaaatc tcccccaat 60
tctccagcca gggaaggcg agggcgcgga cggcgacggc gacgatcatc ccattctcca 120
ccagctgatc ctctcgcctc atcgtctgta gtacggagc ggcggcgagg tggagccgct 180
acgaggacaa ggtcttcgag caecgcctgg tggcggtggc ggaggactcg cccgaccggt 240
ggcagctgat cgggaaccgc ctgaaccggt ccgctcgca agtgttcgag cactacccaa 300
ggctggtgga ggaattgac gcgatcagat cggggcggtg cgagc 345

<210> 1309
<211> 337
<212> DNA
<213> *Eucalyptus grandis*

<400> 1309
 cattagagct gaccocctgaa agtggttaagc atgggtgcaca atcttggtcaa gaaggcagca 60
 ctccctctcat cagttatgaa aagagttcag aggatgggata taattggcgga aaatatggccc 120
 agaaaaatgt taaaggaat gaatttgggc gtatgctatta cagatgcacg catccaaact 180
 gccctgtgaa gaaacaagt gaggcgtcgc gttagggccg gattaccgat aacatctact 240
 tagggcagca taatcatgct agcccacaga agcaccctacc agtggtgtgtc agctttgctg 300
 tgtctatagt tgaggagaaa ccagagaagc cttccccc 337

<210> 1310
 <211> 383
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1310
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 gccctctctct ctctctctctc ctcttttcca agaagatcga gaatttgggc acccttcagc 120
 atctgacttta agtttagtct gaaggagggg ttgcgtgatt cccatgtgat gaagtgggaa 180
 acgggaggttc ccttaccacc atgtgcacgc agtgcgaatt ggtttttcaa cgaggaggga 240
 aggaccgcga aatggacccc tgcgcgaac aaaatgttgc aaaaagcgct ggcggtgcac 300
 gatcaggaca cgccggatcg gtgggtagg gtcgcctcga tgatccctgg gaagacgggtg 360
 gaggatgtgg ttaagcacta tca 383

<210> 1311
 <211> 455
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1311
 gttcatcgcc ggctacgggt ctccacatc taccctctct ctttctctcc cctcctcttc 60
 ttctgtctct ctctctctctc tcgagccgct gtctgtctct gatggtgtct cgacaagccc 120
 cgaccctctt ggcttcgagc taccgggtcc gatcgggctc aaccacctca cccatctca 180
 gatcaaccag atccaagccc agatccagtt ccaaagcagc aacttgcctc cctaccatgg 240
 ccacggctac caccgcagca tgcttctggg accgaagccc gtgtccatga agatttccgg 300
 gtccggcgggc aaaccggcga cgaagctgta ccgggggtgt aggcagagggc attggggcga 360
 gtgggtcgcc cgagatccgg ctgcccaaga acaggaccgc cctctggctc ggacaccttc 420
 acacggctga ggaagccgcc ctgcctacg accgg 455

<210> 1312
 <211> 472
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1312
 tgcaaaacct agactccgca tcttcgggag gaaagtctct ctctgcgaa acctcgtacc 60
 gcgctctggc ctgccttgcg cgataatggc agattctctt cgcaagaagt attcaagatc 120
 ccctccacct tggagagagt aatcaaggtc taggtcgaga tccaggtcta ggtcccaacc 180
 ctgggtacaag caccggccaa ggtcacggctc cagaagccat ggcagatcaa gatccagaag 240
 tcatggcaga ccagtggagt agaaacaatc tggaaacgca ctttaactga cgcgtttatc 300
 cactaggggt actgaaaggg acctagaaga ccacttttca aaagagggga aggttgcctc 360
 gtgctttctc gtggtggagc ctgcacacg catctcccgt ggttttgcgt ttattaccat 420
 ggagactggt gaggatgcta accgctgtgt caagtatctg aatcaagtct gt 472

<210> 1313
 <211> 384
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1313
 gcacagtcta acctgattac ctacaaagga cctaccatga ttgctgttac actgcaagca 60
 atcgccatat tgttaaaagga gagcttggag tgggattgggt ttatcaatct cagtgcctca 120

gattattcctc	tggttaacgca	ggatgatctg	ctttacgtgt	tctccaacgt	atctagaagt	180
cttaattttca	ttgaacatga	tcagatttct	ggatggaaat	tgaaacacag	atctaaatca	240
atcatcatcg	atccaggatt	gtacctgtca	aagaagtatg	aagtaacctg	gagcaactcaa	300
cgtcgatcag	ttccaacatc	ttccaagtgt	tttactggat	cagcatgggt	aatggtaact	360
cgtctctttc	tcgagtattg	tata				384

<210> 1314
 <211> 428
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1314	
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agagcttccc	caccggccag
cccccatccc	cgctctcttc
tgagcgtgtc	ggagggcggt
atctgaacat	cccgcgctc
acgacnaggt	ggagagcccg
agacggaaagc	ggctcgaact
gcgagact	

<210> 1315
 <211> 140
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1315	
ccaagggccgc	ggcggtgcac
tgcggaagag	gaagtggggc
ggatctgggt	cggtctctac

<210> 1316
 <211> 502
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1316	
gtaaaaaag	ggcagccctc
ttctttttct	ttgcttccct
ctgggtgctc	tcgtctttcc
atctctcaat	tcgactgtca
gttcgattcg	gattctctcg
gatccagcgc	cgacgaataa
gtgtacacgc	tgacctttga
aaatggatg	agctcataaa
gctagtggcg	cttgggtggg

<210> 1317
 <211> 365
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1317	
cgctgacgag	gcggggcgtc
cgctccaag	caccaacggt
tgacgtctgc	caggagaggc
caggaggtgc	gatctccgca
cttgctcagc	gggggtgaagc
tgctctctgc	tccaacggat
gttca	

<210> 1318
 <211> 372
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1318
 gtacgataaag tatccctctt cagtcacccc cgcgcacgat cctcctgcgg accgcctcct 60
 ccccgccggt ttcgcgatct cccgcgcacg cgcgcacaat ggtgaagcgg agcgggcggt 120
 gggcgcatcg gggccccccg ctggcgccgt tcctcagcaa gtgctacgag atgggtggagg 180
 acgaggcgac cgacccccatc atcgcgctgg ggagcgccgg cgacaccttc gtcattctggg 240
 acatcactca attcaccctc cagttgtctc ccaactactt caagcactcc aacttctcca 300
 gcttcctgctg ccagctcaac atctacgggt tcagaaaagt tgattcagat cgttgggaat 360
 tcgcaaatga tg 372

<210> 1319
 <211> 363
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1319
 accctgtata atctcaatcc ttggatttag agaagatttg tccaggacaa gaggagccac 60
 agatgaagca atccatgcac tgccgaacct caagtttaag ttaagaaga acagaaatag 120
 cagtgatata gaaaactcag ctctctggga aggagtaata gctgctggaa cagaaaagga 180
 gcgtgtgatt tctggggatg atgctgtctg ttgcataatg ttagcaaaat atgcaaacaa 240
 tgacgagctg agggagcttc catgcacaac tttctccac aaggagtgcg tggataaagt 300
 gctgaaaatc aatgcattgt gtccctctatg caagagttag gtccgggataa tcacgctgggt 360
 atc 363

<210> 1320
 <211> 401
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1320
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 tttgtcactt ttgctgattt cccactattt tcaggccttg gttggcttaa ctggagattc 120
 atgggtgaat gtaagtcatg cgcatacttt gtattgtatg atatgtatga actgcttctg 180
 tgagtcacat caacttgtcc ataaaccttg tattgtagtt ctgtgttttc acggccagta 240
 agattcactc tttatgcgat atctctattt tcctgatgca tgagatctcc ctltctgtta 300
 agctctctta tttctgcgat cagaatttga tcctttttca cagaaatcc cttcaagctc 360
 atttccaatt ggttttccaa attctgtagt tcttttaagc t 401

<210> 1321
 <211> 364
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1321
 ctctgctcgc ggagttcttat atcaggggag ttaacatgaa cctacaagct gcagagtctg 60
 ataaggagga tttgaagaag cagttggatg aactaaagaa gcgatcatcg gataaagaat 120
 gtatccccgg ggatcaagat cgcaagatgg caaaacctac gggaagttagg tccactgggg 180
 tggcaatcga tgtgaagata atgggttggg atcgagtggt tcgagtagag agcgggcgga 240
 aggatcatcc tgcagcaagg ttaattgggt ctcttcaaga attgaacttg gagt tgcacac 300
 atgctagtgt tctctgtggt aacgagctca tgatccacaa gccacagtta agatggggag 360
 tcag 364

<210> 1322
 <211> 413
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1322
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 gacattgctc ccttgatcct atggaagtag aattaaagct aatcatcaag ctaaacatga 120
 actacaacta gtacaaaact ttacagactc gtcaaaaccc acaagtttca ccaccacgca 180
 gaagaagttg ccatagctcg attcctccac cagagataaa gagctccatc cttctctttg 240
 attctataat tctcgttata ttcccttaat agattttctga cagcatcagt aactgcagaa 300
 ctcaatggga actgttgaaa ccgggccatc ctaaaccttg acctccattt ccccaaaagt 360
 tcatgccttt caaccctttc cgtctcctca caagctatca tgggtggtat gtc 413

<210> 1323

<211> 382

<212> DNA

<213> *Eucalyptus grandis*

<400> 1323
 caacaggatc ctttgtgtac tttctttgta tccacagaaa gatggatgag agcaataaca 60
 accctggggg ggcgtgataat gccctgggag acgacgggca gttcaaggag caagaccggc 120
 tgcttccgat agcgaatgtt gggcggatca tgaagcagaa cttgccgccg aatgccaaaga 180
 ctctcaagga ggccaaggag acgatcgagg agtgctgttc ggagttcatc agcttcgtca 240
 caagcaggag gtcctgataa tgcgggaagg agaggaggaa gactgtgtaa ggagacgaca 300
 tctcgtgggc gatcaaacgc ctaggcttcg acgactatgc gactgctttg aggaggtacc 360
 tgcatagata tagggaaata ga 382

<210> 1324

<211> 377

<212> DNA

<213> *Eucalyptus grandis*

<400> 1324
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 tatctctctc tctccaactc ctctggttct ctgttcgccg aaagaaatgg ggagacattc 120
 trgtctgtgt aagcagaagc tgagaaaagg gctatggtcg ccgaggaagag acgagaagct 180
 ctccaactac atcacccgat tccggctcgg ctgctggagc tctgtacaga agctcgcccg 240
 taagacatga tgacagacgg gaaaggagaa gctcatccac agttgttttc tggggaataa 300
 gtttctgttc ttggagagaa ttgattcga aaacctgtg aatgatcgaa tttcttcgtc 360
 gaatgcacga ctccaga 377

<210> 1325

<211> 305

<212> DNA

<213> *Eucalyptus grandis*

<400> 1325
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 cgaaggggca cgtacacacg cagcagcagc cgaacacaggt cggcgccgcc gagcccaagt 120
 acagggcggt cggagggcgg cgggtgggca agtacaccgc cgagatcagc gaccocgtca 180
 agaagggccc cgtctggctc ggcacctcgg ctcgcccgga ggagggccgc cggcctcagc 240
 acctcgccgc cgtccgggtc cggcgctcca agggcaagac caaattccccc gctcctctct 300
 acgac 305

<210> 1326

<211> 288

<212> DNA

<213> *Eucalyptus grandis*

<400> 1326
 gtgctttgga gtcagcttcc tctctgtctt ccgaatatg acttctcgag aatacagctg 60
 acttctcata ttacagagtc gatcgtcgga gctcggcgcg ttcatagagg aattggctgg 120
 cttaaggttc ctggggctcg tgctttggat gttaaagctg tagagactga atcgacgatg 180
 gatgggtcgc aaggaaaatc gaatgcctcg gctccgttcc tgggtcaagac ctatgagatg 240
 gtcatgatgc ctacagcgga ctctcgtgtg tctcggagcg agagcgga 288

<210> 1327
 <211> 190
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1327
 gagagagatg ggggtccgga ggaatgacggg tcaatcgtcg tcccggtcgg ggcacccggg 60
 cgctccacc agcgccggcg gcggggcgga gtcgcccgcg cgggttcgcgc cggcggtcca 120
 gccggagata atgagggccg ccgagaagga cgaccagtag gcctccttcc tctacgacgc 180
 ctgcccgac 190

<210> 1328
 <211> 259
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1328
 gtggtttcgg ctccgccggc cgttcgagg aggaagcttc cggcgggggg ggtggccatg 60
 gcccgcccgcg ggtcgggtcgc gaagtcggag gaggagtgcc aggcggtcct gtcgccggag 120
 cagttccgta tcccgaggca gaaggggacc gaatatccag gcacgggtga atacacaagt 180
 tttctgaaga gggggtgtac aattgtgcag gatgtgggac tctcctttac cgggtctaaa 240
 ctaaaatttaa ctcccgctc 259

<210> 1329
 <211> 381
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1329
 gacagggggt tctgtgttg attgtgtgt gagatttga gggacgagtc atggcggatc 60
 aggccttgga gggaaagcca ccggttgatc tgtccaaaga tccctcagga atcgttccca 120
 ctcttcagaa catagcttca acagtgaatt tggactgcaa attggtatct aaggccattg 180
 ctttgaagc tagaaatgct gagtataatc ccaagcgctt tgcgtctgta attatgagaa 240
 taagggagcc aaagacaacg gcattgatat ttgcttcagg gaaaatgggt tgtactggag 300
 ccaagagtga acaacaatca aagtttagcag tcgccaagta tgctcgaatc attcagaaac 360
 ttgatttccc ggctaaattt a 381

<210> 1330
 <211> 347
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1330
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 gaaaaagacc ccggaagacc tccgctcccc gcggcggaag atggcgcgga ggcacgcgaa 120
 gatcgggagg aggttagagg gcaaggtcgc catcgtcacc gcctccacgc agggcatcgg 180
 cctcgccalc gccgagcgcc tcggcctcga aggcgcgcgc gtcgtcatct cctctcgcaa 240
 ccagaaaaat tgggatgagg ctgctgaaaa gctcaggcca aagggtatag aggttttggg 300
 cttgggttgc catgtttcca atgcacagca gaaggaaatc ccttgtt 347

<210> 1331
 <211> 337
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1331
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 aagcgcgctg tccgcgagct caactccctc atcgccgggc cctcctccgc cgcgcgcgcc 120
 gcccccgagc acgcccgtcga cgaggaggtc accgacaccg agtggttctt cctcgtctcc 180
 atgacgcagt ccttcggcaa cgacggcagc ttgcccgccc aggcctgtga cgggtcgacc 240

ccgcttttggg tgtcggggcgg ggaccgcctc gcgcactgcg gctgcgagag ggccaagcag 300
gcggcgattt tcggggtcaa caccatgggtc tgcgtcc 337

<210> 1332
<211> 325
<212> DNA
<213> *Eucalyptus grandis*

<400> 1332
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cttaatcaga ggttttaacgc cctcagggcc gtgggttccaa atgtatcaaa gatggataag 120
gctttcactgc tccaagatgc ggagttcttat atcaggagag ttaacatgaa cctacaagct 180
gcagagtctg ataaggagga tttgaagaan cagtgggatg aactaaagaa gcgatcatcg 240
gataaagaat gtatccccgt ggatcaagat cgcaagatgg caaaacctac gggaagtagg 300
tccactgggg tggcaatcga tgtga 325

<210> 1333
<211> 362
<212> DNA
<213> *Eucalyptus grandis*

<400> 1333
cagcatcatt ataattgtcca tgaagagaat cgactgcggc atcacgattt acattagttt 60
cctcctccctt ttgccttctgc gcacctgtgc aagcctttga cttcgtagag tcattgtcgt 120
tccttgggca cccctctttg tagctgggtgg agcagggggg gctacaacgg atgcttggga 180
gagtgatgat cgctctctcat cagatgagaa accgggaata cgaatgttgt ggttgcgttc 240
aaggtgtagt tgcagggtgc gcacttccaa agtgcctcca ccgcgatgct tagccaagcg 300
acacgcaaaag ttgggtgacgg aatcgatgaa ttcatcagca atagaaagca ggagatcttc 360
ca 362

<210> 1334
<211> 216
<212> DNA
<213> *Eucalyptus grandis*

<400> 1334
gtttacgcgg ttgttgatgg attacttaaa tgaatttct tatgatgcac ggggtgctgg 60
cctttattac agtgtgcatg acaccaacac aggttttccag gtcactgtgg ttggttatag 120
tcacaagcta aggatattgc tggaaaaagt catcgagaaa attgcaacct ttgaagttag 180
acctgagaga tttgttgtga tcaaggaaat ggtgac 216

<210> 1335
<211> 326
<212> DNA
<213> *Eucalyptus grandis*

<400> 1335
gcngaactcag agcaactggg agggcgataa gatgctcgac gtttacatgt atgaactactt 60
gatgaagaag aagctgcaca acacggcgaa gtcattcatg actgaaggga aggtgtcgcc 120
ggatcccggtt gcaattgatg ctccctggggg attctttttt gagtgggtgt cagttctttt 180
ggatataattt attgcaagga ctaacagaaa acattcttgaa gctgctgcag cataatctga 240
ggcacaacaa ggtaaaagcaa gagagcagca gcagcagcag cagcagcagc agcagcaaca 300
gcaactgcag atgcaacaat tgcac 326

<210> 1336
<211> 382
<212> DNA
<213> *Eucalyptus grandis*

<400> 1336
aaacaatcga taactcttcc ttccatcttt cctctctctc ccccccctga aatcccgaat 60

ccaccaccac	aacccccccac	cgccaccctgc	tcgttggttaa	tctctctttt	gcttctggag	120
agggaaagta	agtgatctcg	gatcagctga	ctttggagaa	tgatcctaaa	gctggtattt	180
ctacatctga	atcatcttta	agagcgcgtg	gggtctctga	tggeatctca	tccatcaaat	240
cattcgtgtg	ggcgccctca	tcaaggtcgc	tttgctgatg	ctttatacaa	agagctgtgg	300
catgctctgt	ctgggctctc	tgtaaccctt	cctcgagagg	gagagcgtgt	ctattatttt	360
ccacaaggtc	acatggagca	gc				382

<210> 1337

<211> 322

<212> DNA

<213> *Eucalyptus grandis*

<400> 1337

ctctctctct	ctaggtcgct	ctcgattctc	gctggtctcg	ccttctctcg	actatcttcg	60
cgatcgcttt	tggaggatcg	ttcggggaaa	ttggaccgaa	gtttcgattt	ttagcaggcg	120
agatcagctg	aatcgggaga	tcaagaataa	ggagtctcac	gatgagacag	gatgccaggc	180
cccaaaagtc	ccaatctctc	gcattaacaa	ctgtggcttc	ttcggaagtg	ctgccaccgc	240
caatatgtgc	tcaaaagtgc	acaaggacgt	gatattgaaa	caagaacagg	cacaagcagc	300
tgctctctcg	attgagagca	tt				322

<210> 1338

<211> 536

<212> DNA

<213> *Eucalyptus grandis*

<400> 1338

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ctaaaaacaa	agctcttctt	gagattctac	agtcgcaatg	cagaggagaa	agtgcaaatg	120
cagagcttca	tggtcccatg	ggctgtgacg	atgagctctc	ttttgaaaaa	acaggcacgc	180
gggattctac	atacagagtg	aaagctgtta	agcacacaa	agttctcttc	agttctcttc	240
ctgaaggacc	aattaaagca	attgtctctt	ctcagtgagc	gagtatgtca	aacttgggtt	300
aacaaaatct	gatccatttt	ggcataaaat	atagacggct	tgatggaaac	atgacccctt	360
ctgcaagaga	caaagctgtg	aaagatttta	acaccgatcc	tgagatagtc	gttatgtctaa	420
tgctcatcaa	agcaggaaac	cttggtctaa	acatggttgc	tgcttgtcat	gttatctctt	480
tggatctctt	gtggaatcca	accactgaag	atcaagctat	cgatcgagct	cataga	536

<210> 1339

<211> 438

<212> DNA

<213> *Eucalyptus grandis*

<400> 1339

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cgtatgcgtg	tgcggggagc	cgagcatcgg	gacctcgtcg	cgggactcga	cgttgaggct	120
gtgggctctc	agcgccggcg	agagggcgaa	gtacgaggtg	gcgaggggtg	tgttagggca	180
caagagcttc	tgggtccccc	tgccgtgggt	tccgccacgc	gaggagcttc	cggagggcgg	240
gatcgtgttc	ggcggaatgg	acactctcgt	galggcttgg	gatttgagga	atggagaggc	300
gcagacgttg	aagggccatc	agttgcagg	caccggcatc	gtgttggtga	gcggcgacat	360
ttgtttctgc	ctcttgttga	ttgtacctta	ataagatgga	agaattggca	gcttacggag	420
cactgggagg	ctcattaa					438

<210> 1340

<211> 533

<212> DNA

<213> *Eucalyptus grandis*

<400> 1340

ctttggaggc	cctcagctcc	cccaccgctc	cctccgcccc	gttccaatcc	atgaaggact	60
cctccccccg	cgcgcgcgcc	gccgctctct	cctctctctc	cgcctaagac	ctccccctcg	120
ccgagccctg	ggccaagcgc	aagcgtccca	agcgcgccca	caaccccgcc	tccgaggacg	180
agtaacctgc	cctctgcctc	atcatgctcg	cgcggggcgg	cgcgggcggg	accctcccc	240

cgcgcgctcc	cccccggttc	tcttcgagg	cggccaaggt	ggcctacagg	tgccccgtct	300
gcgacaaggg	cttccccctcc	taccaggccc	tggggcgcca	caaggccagc	caccgcaagc	360
acgcctcctc	cgcctcggcc	gcgcgcgggg	gtgacgacca	gccgaccacc	tcgagcacct	420
cgcgcgggac	gacctcctcc	ggcgtctccg	ggaaggtcca	cgaagtgtcg	atctgccaca	480
agagcttccc	accggccagg	cgctcggcgg	gcacaagcgg	tgccactacg	agg	533

<210> 1341

<211> 363

<212> DNA

<213> *Eucalyptus grandis*

<400> 1341

gaagcatttg	ggaagtggac	atggaaggaa	agatcccgac	tttggtactg	tttctctgca	60
tcttctcggc	tgccgtctcg	gccgagtaac	tgcggcccca	gcctcgcgag	accctcgatt	120
tcccgtggga	cgcgaagccc	tctctcttcc	ccagcagggt	tcacatttct	ttagctggag	180
atggacatat	gcgcatttca	tgggtcactg	atggtaaatc	ttccctctca	tacgtggaat	240
acggaacatc	gcgccgttga	tatgaactca	cagctcaagg	agagagcact	tttatagtt	300
atctatttta	tagctctgga	aagatacacc	acacggtgat	cgggccattg	gagagcaaca	360
ctg						363

<210> 1342

<211> 316

<212> DNA

<213> *Eucalyptus grandis*

<400> 1342

cctggcctct	gccttagctc	tcttctcgt	cctcgccctt	atcaagctat	tcagacccaa	60
aaccaaccac	ctgaacctcc	cgcgggggag	atttggtatg	ccaatcattg	gcgagagcct	120
ggagtctctc	cgttcccgag	ttgaaggagg	cccggagaag	ttcatcaagg	accggatgac	180
caagtacaac	tcccctgtgt	tcaagacctc	ggtgctcggg	gagccgatgg	tcactcctgtg	240
tgggcgcggc	gggaacaagt	tctctgtctc	aaacgagggc	aagaaggtgg	tgctgtggtg	300
gccgagctcg	gtccat					316

<210> 1343

<211> 322

<212> DNA

<213> *Eucalyptus grandis*

<400> 1343

agggtgtccg	atcttcatag	aagatgatga	tgttgagctg	ttgtggcctg	gcagcttccg	60
tcaggcgcca	caagcacacg	ctcctcaacc	gagttttgtt	ctaactggag	gttctaacct	120
aagctctcgt	ggggtgaatc	caccatctga	tgcaaggcaat	tcagctcctg	acttgacact	180
gaactcttaa	aagaggttaa	tcttcagtta	agtctcatgt	ttgcttaacc	caacattgca	240
ctctctgctt	cttttggtat	attcccaaat	gttctttcca	gttctcttcc	tgtaagtgtc	300
cactccagta	tgaagtctat	aa				322

<210> 1344

<211> 323

<212> DNA

<213> *Eucalyptus grandis*

<400> 1344

ctggacgcgc	acctgaagac	cctgacgcgc	cagctgcgcg	ccgtctcctg	cgtaagttc	60
tccaacgcag	gcacctctct	ggcctcgcgc	tccctcgaca	aaacctaat	catctggtcc	120
tcacacgcgc	tctcctctct	ccacgcgcgc	gtcggccact	ccgagggcgt	ctccgacctc	180
gcctggctct	ccgactccca	ctacatctgc	tccgcctccg	acgacgggac	cctccgcate	240
tggtctctcc	gctcccccct	cgactgcctc	aagacctcgc	gcggccacac	cgaacttcgtc	300
ttctgcgtca	acttcaaccc	gca				323

<210> 1345

<211> 235

<212> DNA

<213> *Eucalyptus grandis*

<400> 1345

cctccgcccc	gttccaattc	atgaaggact	gggtaccccc	ccgccgaagc	cgccgcctcc	60
tcctctact	acgaatacaa	ctccccctc	gccgagccct	gggccaagcg	caagcgctcc	120
aagcgcccc	acaacccgcc	ctccgaggac	gagtaacctc	ccctctgctc	catcatgctc	180
gccgcggcg	gcgcggcg	gacctcccc	ccgcgcctc	cccccggtt	ctctt	235

<210> 1346

<211> 350

<212> DNA

<213> *Eucalyptus grandis*

<400> 1346

gtttggagga	agttcaagct	atgggaagga	tgctcaaagc	ccgcaggaca	tgcatgattc	60
acggccgaca	aaacgaccac	gtaatgttgg	ggagccttat	cgtgaccag	gacaggctga	120
gccgatggag	gaacatggaa	tgggatcagc	aagtgtacct	atggtcgagg	caggcagatc	180
ggacggaggt	cataatccaa	ttatgtcgcc	caccgtcccc	gcaaatgtgt	ctacggcttg	240
gagaggtcgg	gtatagtata	aaaacaatcg	caaattgtcg	tgtaagaggt	gtcgtaggct	300
aaaactcaag	tcgcagccgc	ttttcccttg	ccagtcatgc	gtcaagagag		350

<210> 1347

<211> 197

<212> DNA

<213> *Eucalyptus grandis*

<400> 1347

cggactcgga	ctggccgag	caaccacgc	cccccgcgag	tccccacccc	cgccgcgcac	60
gacgcggcga	tgctcccaat	gctgcaacaa	gggcccacac	tccaggacct	gccccgtccg	120
cgccggcgcc	ggggacggcg	ggggcgcgcc	ggcgcccccc	tcctctctct	ccccctccac	180
ctctctctct	gcgcgcg					197

<210> 1348

<211> 315

<212> DNA

<213> *Eucalyptus grandis*

<400> 1348

cgctggcttc	gcttccctcg	actatcttcg	cgatcgcttt	tgaggagatc	ttcggggaaa	60
ttggaccgaa	gtttcgattt	ttagcaggcg	agatcagctg	aatcggtgtg	ctttttgcag	120
gtgatcagaa	taatggagtc	tcacgatgag	acaggatgcc	aggccccaaa	aggcccaatc	180
ctctgcatta	acaactgtgg	cttcttcgga	agtgtgtcca	ccgccaatat	gtgtcctaaag	240
tgccacaagg	acgtgatatt	gaaacaagaa	caggcacaag	cagctgcctc	ctcgattgag	300
agcattgtca	acaga					315

<210> 1349

<211> 329

<212> DNA

<213> *Eucalyptus grandis*

<400> 1349

gagagagatg	gggctccgga	ggatgagggt	cagtcgtcgt	ccgggtcggg	cgaccggggc	60
gcctccacca	cgggcgccgc	cgggggcgag	tcgcccgccg	ggttcgggcc	ggcggtctag	120
ccggagataa	tgaggccgcg	cgagaaggac	gaccagtagc	ctctcttctt	ctacgacgac	180
tgccgcgacg	ccatccgcca	ctctctcgcc	accagagtcg	ccgtggcgta	tcaagcgagc	240
acgcagcttc	tcggggcaat	gctgtactat	gtgctgacga	ctgggttcggg	gcagcagacg	300
ttgggggaag	agtactgcga	catcactca				329

<210> 1350

<211> 313

<212> DNA

<213> *Eucalyptus grandis*

<400> 1350

tctaggttcg	tctcgattct	cgtgggtctg	ccttcctctg	actatctctg	cgatcgcttt	60
tggaggatcg	ttcggggaaa	ttggaccgaa	gtttcgattt	ttagcaggcg	agatcagctg	120
aatcggaata	atggagtctc	acgatgagac	aggatgccag	gccccaaaag	gcccaatcct	180
ctgcattaac	aactgtggct	tcttcggaag	tgctgccact	gccaatatgt	gctcaaaagt	240
ccacaaggac	atgatattga	aacaagaaca	ggcacaagca	gctgcctcct	cgattgagag	300
cattgtcaac	aga					313

<210> 1351

<211> 305

<212> DNA

<213> *Eucalyptus grandis*

<400> 1351

ccccgccac	ttatctgcta	tctcgtctac	ttcgtctctat	tagtacctcc	acaatcccat	60
ggcgaaacgc	caacgcaccc	tcgacatgca	cgccggcgca	ccaggctcca	acgatgccat	120
tgacgggaac	agcgtcggg	acaacgcgtt	catcgcggaat	caacgacgaa	ttgactcggc	180
cgccgacgac	gcacnacnca	aagacaagcc	caagaccggc	cagaagcaag	gcgcgcgcaa	240
aataaagatc	gagttttatac	aggacaaatc	gagacgccat	atcaccttct	ccaaaaggaa	300
agctg						305

<210> 1352

<211> 517

<212> DNA

<213> *Eucalyptus grandis*

<400> 1352

gtccctccct	agggttttct	cctcgtcgac	cgcccttctt	ccgagcccta	gcctcgcgog	60
gcaaaaggcc	ctccctccgt	ccctccctcc	gccgccatga	tgcagcagcc	ggtccccgga	120
gccgtccccg	accagcagca	gcagtaaccag	cagcagcagc	agcagcagtg	gatgatgatg	180
cagcaggccg	cccagccctg	gccccgcg	gtgggctgga	ccccgcagcc	ggtccccgog	240
cccatggcgg	ccagtcgat	ggccggcgcc	gcggcgcccg	agatcaagtc	gctctggatc	300
ggcgacctgc	agcctcacat	ggacgagacc	tatctctca	actgcttngc	ccactccggg	360
gaggttctct	cagctaaggt	gattagaat	aagcagactg	ctctgcccgca	gggttacggt	420
ttcattgaat	ttatgacctc	tgacgcagca	gagaggattt	tgcagacgta	caatggcgaca	480
ttgatgccaa	attctgacca	gaatttccga	ctgaact			517

<210> 1353

<211> 472

<212> DNA

<213> *Eucalyptus grandis*

<400> 1353

tttttttttt	tttcagctaa	attggagcag	ctctctttta	taettactga	actagtaatc	60
atggtgaaag	aaacttagac	agaaagttag	gacattacat	catactcctg	aaagacatca	120
aaggcccgag	taacagaaaa	aggccgatac	ggcaacatcc	aaacaaatta	aaagccaaat	180
tgtgacccca	acgtatacat	ccatatacaa	tgccataaact	aaatcattca	ccctccgcga	240
ttactctctt	ttctacttga	atggtgacgt	gacttatctt	gtactctctt	ctaattgagt	300
ccacaacctt	gtccaggacc	atatcgccat	tgccgtcacg	ctttattttg	acatggcagg	360
ctaattagatc	ctttccaaac	gttatagccc	agatgtgcaa	ttcatggact	gcaatcactt	420
catcgatctt	gcaaaagtcca	ctctcgagcc	tagtggcatc	aatctctcta	gg	472

<210> 1354

<211> 472

<212> DNA

<213> *Eucalyptus grandis*

<400> 1354

ccatcgctac	ctgtatccac	aaaaacacac	ccaccttacc	tctgacccgc	ccccccgcgc	60
ctatcgagg	gctctgcgata	cagacgcttg	gctgccaagc	atgaagagaa	gccctccgct	120
gtgctcgaca	aatcccaaga	tccacacagac	agcgcaaaagc	catccaagaa	gccccgccat	180
cgctcacagtc	ccaccacagct	cgctgcccctc	aacgaactct	ttgagaaaaa	cgaacacccc	240
actcttgagg	agcgaggcca	gttggtctgag	aaattaggaa	tggagaccaa	gacctgcaat	300
gcgatggttc	agaacaagcg	tgcttctact	aagaagcgca	ataagggggg	aacctcgga	360
cctcacccag	ccacgagtc	gaacgacttg	tccgaagatg	ctctcaaaac	cccttcgcga	420
ctgccgtcga	tagcgaacct	gctcaacgac	gcacctcat	cggcctcgcc	gc	472

<210> 1355

<211> 503

<212> DNA

<213> *Eucalyptus grandis*

<400> 1355

cacgcatcca	acttcacag	gaaggagctg	agggccatca	tcaagcagag	gaagctggac	60
ttggcagaag	gcaggggctc	ggcgactcag	gacatattgt	cgcacatgct	gttggccacg	120
gacgaagatg	ggaagcacct	gaacgagatg	gacattgttg	acaagatctt	gggtgtgttg	180
atcgggggcc	acgacactgc	gaatgcccgc	tgtaccttca	tgtcaagta	ccttgccgat	240
cttcccaca	tctacgagg	agtctacaag	gagcaaatgg	agatcgccaa	gtcaaaagcc	300
ccaggagagt	tgttgaaact	ggatgacatc	cagaagatga	gatactcatg	gaatgtggcg	360
tgtgaggtgc	tgccattggc	gcctccgctc	cagggagcat	tcagagaaag	cctcaatgac	420
ttcatcttca	atggttttct	catctctaaa	ggctggaaga	tctattggag	taccactcgc	480
actcacagga	gcccagagta	ctt				503

<210> 1356

<211> 360

<212> DNA

<213> *Eucalyptus grandis*

<400> 1356

atctctctct	cccccaaac	cccatcgag	ccaaaaacc	taacgaagat	gaataggagg	60
agggcttatga	agatggcggy	ttctgtccgc	actggtggaa	agggtaccat	gagaagaaag	120
aagaaggctg	ttcataagac	caccacagaca	gatgataaaa	ggcttcaaa	caccctgaag	180
aggatttgagg	tgaatgccat	ccccgcaatt	gaagaagtca	acatttttaa	ggatgatgta	240
gttatccagt	ttttgaaatc	caaaagttcaa	cgctctattg	ctgcaaaatac	ctgggtagt	300
agtgtgtctc	ctcagaccaa	gaagctacag	gatattctcc	ctggcatcat	caaccaatta	360

<210> 1357

<211> 377

<212> DNA

<213> *Eucalyptus grandis*

<400> 1357

aaaaacaacct	ccctcagctc	ctcttcacca	ctggtttttg	agatgatctg	tgtgctcggc	60
gcggttgatt	attatgtctt	attctgactt	gctgaacctg	ctggtttgcc	tggcggtttg	120
gtgcacggcg	tatatgtcgg	ctgcggttct	cgagtgcctc	cgggtcttcc	atactctctg	180
ttcgttttga	tttcgatagc	tggttttcgaa	ggctaagatg	ggctacgcac	agctgggtcat	240
cggccctgcgc	ggcagtgatc	agtcgactta	ttgctcgagt	ttgtataaac	atttgtgaagc	300
tattgggcgg	acaatacaca	tgtttaacct	agatcctgca	gaaaagaact	ttgactatcc	360
tgtggccatg	gatatca					377

<210> 1358

<211> 360

<212> DNA

<213> *Eucalyptus grandis*

<400> 1358

ctctgacgat	ggatataact	ggagaaaaata	tggacagaag	catgttaagg	gctgtgaatt	60
tcacgcgagc	tattacaact	gtacctatcc	taattgtgag	gtgaaaaagc	tttctgaacg	120
tgctcctgat	ggacatatta	cagagattat	ctacaaaagga	actcatgatc	accctaaacc	180

acaaccaagc	cgccgcgttta	ctggaggagc	gaccatgcc	atccaagaag	aaagatctga	240
taggttttca	tttatacctg	cagtgaggag	cacatcgacc	gtatatggcg	agacatctta	300
taatgtgtgag	actgatggta	ctcctgaact	atctcctggt	gctgagaatg	acgaactat	360

<210> 1359

<211> 347

<212> DNA

<213> *Eucalyptus grandis*

<400> 1359

gttccaccac	gctcgtcccg	ctcccgcat	tctgaaatcg	cgatcgccgt	cttcaacctc	60
gggaaaaaac	ctagcggatc	ccctccggtc	gccaatctcat	ctcctgatcc	ccgcgctcgc	120
ccatgcgcgc	gtcgatcccg	ccgcgcgcgc	tctcgcgcgc	gatctccagc	tgatcgcgcc	180
ctcgattttg	ctcccgccgc	cgccgcgatg	gtggtctgca	aatgcgcgaa	ggctacgaag	240
ttatactgct	ctgtgcacaa	ggtccctgtg	tgtggagaat	gcataatgct	tacggagcag	300
caaatatgcg	tggttcgtac	ttactcagaa	tggtttatag	atggcgca		347

<210> 1360

<211> 326

<212> DNA

<213> *Eucalyptus grandis*

<400> 1360

ctctcctec	ccctccacct	ctcctcctg	cgccgcggcn	ggcgccggcg	cctcngcctc	60
cgccggcggg	gtgaagctgt	tcgggggttag	gttaacggac	gggtcgatca	tgaagaanaag	120
cgccagcggt	gggtgcctgt	cgccgcgccca	ctaccactcc	ctgcctcccg	ccgcggcatc	180
cccgaaacccc	ggctcgtccc	cgatcgacgg	gagcgacggc	tacctgtccc	acgatcccg	240
gcccggctcc	cgctcgtcca	atcgccgctg	cgagaggaaag	aaaggatatcg	aggattttga	300
ttgacgcgcg	gctcctgat	tcctctg				326

<210> 1361

<211> 526

<212> DNA

<213> *Eucalyptus grandis*

<400> 1361

atcccaactcc	ccatccgctc	cgctgaatc	ctctcctggg	aaaattaggg	tttctgcaag	60
ctccggatatt	tcgtctccct	ttgggggtcc	tcgatttgat	gataagccat	ggatgcctgg	120
ggctcgtgcta	gtgtgctgcg	cgccgctcctg	tggtctgcct	tgcttggggg	tgcccgcaag	180
gctgcgtcgca	cgctcgtcct	gatcggcagc	aacgtcaacc	tctccttcgc	cgccgctcgag	240
gctgaattcgc	ctccgcgcgat	taagggttct	ggggtttgcg	gcgtgctgta	tcttgcggag	300
ccgatcgatg	cgctcgtctca	attgggtgaat	gagggcaacc	ggttgcccga	tgctagctcc	360
ctcttccgccc	taattgttag	gggaggagga	tgtagtttgc	aagagaaagt	taggagagct	420
caaaaggctg	gattcaaaag	ggctattgtc	tatgacaacg	aagctgatgg	caacttggtg	480
ccaatggctg	gacattcagc	tgggataaag	atccatgctg	tggtcgc		526

<210> 1362

<211> 307

<212> DNA

<213> *Eucalyptus grandis*

<400> 1362

gaccgcgata	ccgcgtgcc	atctggagga	cctatttgac	aaccataaca	tggtcgaat	60
acgggacgta	tgggccccga	atcttgagat	agagattgcg	aacatccgcg	aggccatcga	120
gaaatactcg	tatgtttcaa	tggaacccga	gttctctggag	tggtggcgcg	gccccataggt	180
aacttcaaaa	cgctcctcga	ctaccactac	cagacgatgc	gctgtaacgt	cgacctcttc	240
aagatcatcc	aagtcgggat	cacgctggca	gacgaggagg	ggttgttccc	gcaggactgc	300
tctacgt						307

<210> 1363

<211> 353

<212> DNA
<213> *Eucalyptus grandis*

<400> 1363
cttgaagggtg acttcaacaa acacgatgag gataactgga tccaagaaga gtttgagaac 60
catgtggnta aacaacgtga aggaagagg cgccttttga ctggagatct cctagtgaag 120
ctcgaagag gtgttgggaa gctgggaagt ttcatgttta ctgacaattc cagctgggaat 180
aggagtaaaa gtttccagat agggcctaag gtggccctcag gttattgtgg gaacacacga 240
atccgagaag caaaaacata agccttcact gtgaggggagc atagaggaga atcatataag 300
aaacattatc cactctgacc tgacgattaa atctggagggt tggagaagat cgc 353

<210> 1364
<211> 324
<212> DNA
<213> *Eucalyptus grandis*

<400> 1364
cctcgcccg caaaacccat tcgagggtcga gagtcgagta aagatgaatg tggagaagct 60
tatgaagatg gcgggtttcag tccgcactgg tggaaaagggt accatgagaa gaaagaagaa 120
ggctgtgac aagacaacta ccacggatga caaaaggctc caaagcactc tcaaaagaat 180
tgggggttaat gctattcctg caattgagga agtcaacat ttcaaggatg atgttgtcat 240
ccaatttga aatcccaaaag ttcaagcctc tattgcagcc aatacatggg ttgtcagtg 300
tgctcctcag accaagaaat tgca 324

<210> 1365
<211> 306
<212> DNA
<213> *Eucalyptus grandis*

<400> 1365
gacaaaattga tgaacatga atatggatgg gtgtttaaca ctccggttga tgtaaagggc 60
ctcggttttg atgattacta tagcatcata aagcatccaa tggacttggg cagtgtgaa 120
acaaggtctga accggaactg gtataagtca ccgaaagaat ttgcagagga tgcagacct 180
acgttccgta atgcatcag atataacct gaaggggcaag atgttcatgt catggctgag 240
attctgtaca agatatttga gatatagatgg gccattatag agtcagatta taatcgtgaa 300
atgctgg 306

<210> 1366
<211> 345
<212> DNA
<213> *Eucalyptus grandis*

<400> 1366
cggccgctg cagctttccc ctccgtgtcg acacgacgac gactccgccc ccgctcccc 60
ctcgctgtgt ctctccttct ctgcgcctgt atatatctct cgtccccga caaaaaaagg 120
agaaatctga agagagggga ctgaaattag gttattgaga aggatctctc ccgtgaccaa 180
tcttttggag aaagatggct tctcaattta atttcaaaag cataaccgat ccatcgcaag 240
ctgaaggagt agctgggaaa tcacacggaa atcactctt aactcggcag ccatcaatat 300
atgctttgac ttttgatgag ttcaaaaaca catgggggtg gcttg 345

<210> 1367
<211> 292
<212> DNA
<213> *Eucalyptus grandis*

<400> 1367
cgaaggtctc acatttatga aactcaagggt ctgaaggatg catttattat atgtctcaat 60
gcgtagaggt ccattgatgc aactaaaaag gggagccttg ctaggttcat aaatcatcoa 120
tgccagccaa atgttgagac aaggaatgg aatgtatttg gggagataag agttggcata 180
tttgccaagc atgacattcc tgctggatct gaattgtcat atgattataa cctcgagtg 240
tatgggtggg ccaaggtccg ttgtctctgt ggtgcacct a gctgtctggt tt 292

<210> 1368
 <211> 278
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1368
 ctgcaacgac ctgacggcgt tgcggcggtt cctgccgtcg aaccaccacc aggcacgagga 60
 ggacgaggag gacggggcgg cgccccggga ggacggcggtg ctgggctgcg acgagttccg 120
 gatgtacagag ttcaaggttg gaaagtgcgc gcgcgggagg tcgcacgact ggacagagtg 180
 ccgctaagcg caccggcgcg agaagcgcg acgcagggac cgcgcggcgt tcttctactc 240
 cggcactgca tgtcctgatt tccgcaaaagg cgcgtgca 278

<210> 1369
 <211> 328
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1369
 ttcacttcgt cgcttgcttc gtctctctcc ctgtctctcc gcgcaatctc catcggcgag 60
 aactctgata aagcatccct cggctatctg tcggatggcc tgcctgggtag atcccaagag 120
 aagaagaaaag gaggctccatg gacagaggag gaacacagaa ccttcttggt ggggcttgag 180
 aagcttggga aggggtgatt gagaggcatc tctaggagct atgtgaccac aagaacaccg 240
 gccagggttg caagtcatgc tcagaaatat tctctccggc aagtgcagct caacaagaaa 300
 aagcggcgct cgagcctctt tgacatgg 328

<210> 1370
 <211> 96
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1370
 tgaattcggc ggggagtgaa tgaatccaag aagcaactgg ctaattgtat ataattgatga 60
 tgaggngac atgatgcttg ttgggatga ccggtg 96

<210> 1371
 <211> 320
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1371
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 gtctgtcgat tctcgctggt ctgcgcttcc tcggatgtgt tcgatcggt acgctgaatc 120
 gcgcggggaa ttccggcggt gtctcgattt tgcgagcga gatcagcaga atcaggagat 180
 caggacaatg gaggctccaca atgagacagg atgccagcct ccaaaaggcc caatcctctg 240
 catcaacaac tgtggctctt ttggaagtgc tgccactgcc aatatgtgct cgaagtcca 300
 caaggatgtg atgctgaagc 320

<210> 1372
 <211> 343
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1372
 cggccgctcg cagctttccc ctccgtgtcg acacgacgac gactccgcgg ccgctcccc 60
 ctccgctcgt ctctccttct ctccgctgt atatatctct cgtcccccga caaaaaaagg 120
 agaaatctga agagagggga ctgaaattag gttattgaga aggattcttc ccgtgaccaa 180
 tcttttgag aaagatggct tctcaattta atttcaaaagg cataaccgat gcacgcgaag 240
 ctgaaggagt agctgggaaa tcacacggaa atcactcttt aactcggcag ccatcaatat 300
 atgctttgac ttttgatgag ttcaaaaaa catgggggtgg gct 343

<210> 1373
 <211> 310
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1373
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 tccgaggacg agtacctcgc cctctgcctc atcatgctcg cccgcggcgg cgcggcgccg 120
 accctcccc cgcgcctccc ccccgcggtc tcttccgagg cggccaagggt ggcctacagg 180
 tgcctcgctc ggcacaaggc ctccccctcc taccaggccc tggcgcgcca caaggcgacc 240
 caccgcaagc acgcctcctc cgcgcgggcc ggcgcggggg gtgacgacca gccgaccacc 300
 tcgagcacct 310

<210> 1374
 <211> 306
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1374
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 aattccggag atggtgaaga gagacagaga ggacacggag gtccgaagccc tggccagggc 120
 caattgcttg atgcctctct cccgtgttgg cgagagcacc gactcggcgt cgcgggaccg 180
 caaatcgcgg cctacagagc gaattgttcg ctgcaacact tgcaaccgcg agttctctctc 240
 gttccaggcg ctcggagggg acaaaagccag ccacaagaag cagaagctga tctccggtga 300
 cctctt 306

<210> 1375
 <211> 273
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1375
 cctctctctc ctgctgcggc tacgacctgc ccctcgccga gccctggggc aagcgcaagc 60
 gcttcaagcg cccccacaac cgcgcctccg aggacgagta cctcgccctc tgggtgatca 120
 tgctcgcccg cggcgcgccc ggccggacc cccccccg cctccccccc gtggtctctt 180
 cggaggcggt caatgtggcc tacaggtgcc cggactcgca caagggtctc cctctctacc 240
 aggcctctgg cggccacaag gccagccacc gta 273

<210> 1376
 <211> 319
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1376
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 gaaatcagaa gaggacagga gcgacacgag caactcgcaa gagaaggtgc tcaagaaacc 120
 tgacaagata ctctcttgcc ctcgatgtaa tagcatggac accaaattct gttaactaca 180
 caactataat gtgaaccagc cccgacact ctgcaagaac tggcagagat actggacagc 240
 tgggtgaacc atgaggaatg ttctgtgggg tgctggccgc cgcaagaaca agaactcgcc 300
 atctcattac cgtcatcta 319

<210> 1377
 <211> 339
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1377
 tctctctctt cgtttctccc gtttctctct ctctacctct cgccaagaaa cggccaggaa 60
 aggaaggaa gtataaaagaa aagaaaagga agccatggct cggagagaaa agcccagcgt 120
 cgcgcctatc ccaaaccta acggcgctaa ggaatccgt tccggggcgt tccggaagag 180
 gccctggggc cgtacgccc ccgagatccg ggaccccgcc aagaagacc ggggtgtggc 240

cggcaccttc gacacagccg agggagccgc ccgcgcctac gacacgcgcg cccgcgagtt 300
ccgcggcgcc aaggccaaga ccaacttccc cactctcgc 339

<210> 1378
<211> 343
<212> DNA
<213> *Eucalyptus grandis*

<400> 1378
ctttgacgcg cattaaattc ccgcgactcc gaaatatctc acctccctct cccgcagaat 60
ccctagattc ctctcttagc tctctctctc tctctctctc tctatagaaa 120
attctcatc tttggtggcg gcgagaggcg gttgcgaggg atttccggtc gcgggtgtat 180
gtgcgtgggg ttggggttgg ggtgggggag atgaagattc agtgcaacgt gtgcgaggcg 240
gcggaggcga gcgtctctcg ctgcgccgac gaggcgccgc tctgctgggc ctgcgacgag 300
aaggtgcacg ccgccaacaa gctcgccagc aagcaccagc gcg 343

<210> 1379
<211> 368
<212> DNA
<213> *Eucalyptus grandis*

<400> 1379
ctcgattctc gctgggtctcg ccttctctcg actatcttgc cgatcgcttt tggaggatcg 60
ttcggggaaa ttggaaccga gtttcgattt ttagcaggcg agatcagctg aatcgggaga 120
tcagataaat ggagctctac gatgagacag gatgccaggc cccaaaaagg ccaatctctc 180
gcattacaac ctgtggcttc ttcggaagtg ctgccaccgc caatatgtgc tcaaaagtgc 240
acaaggacgt gatattgaaa caagaacagg cacaagcagc tgcctctctg attgagagca 300
ttgtcaacag aagttccaac gaaaatggta aaggacctgt ggcaactgaa aattggattt 360
gcaagctg 368

<210> 1380
<211> 362
<212> DNA
<213> *Eucalyptus grandis*

<400> 1380
gaggctcagt acttcgtgta gccatggggc atgaaagtga agcatttgaa gagtttgttg 60
atgcgcacaa aacttgcttg aatgatctca tgttctctcc tactcgtaat gccttgagct 120
ctcaagtggt gctgcaaatg cagaaaagct tgcgtccttg cagaacgaat atcatcttgc 180
taaagcaagg attgatgaag atcatgagaa ggccgagcga ctggagaaga aggtcaaaac 240
tctcacattc ggctatcaga tgcgggagaa gactctctga gaccaaatg agtcaacctt 300
caagcagctg gacctgcag ggacagaact cgagtgttcc ccagctctgc agaagcaaga 360
gc 362

<210> 1381
<211> 459
<212> DNA
<213> *Eucalyptus grandis*

<400> 1381
tgctcgcaaa gtttgtttct ttgctcacaa gcccgagaa ttaaggcctg tctatgcttc 60
gacgggatca gctatgcctt ccccaaaatc ctactcatca agtgggctgg acatgtccac 120
attgagtctt ctctcaatca gttctcgtc agcatcgctg cctgttactt caacagcacc 180
catgtctctt ctctcagcct cgtcatctcc gatgtctgtg aacatgtggc agagcaaggc 240
taacaagctc tccccgcaa tgcctgagct agcgtgaaga ctgctttgag 300
tgctagggac ttggaacctg agatggaatt gcgtggtcta gagagtcaga tggccactca 360
acagcatcag ttgattggaag agatatctcg tctctctcca ccatcctctt gcttttagtag 420
taggattggg gaagtgaaac ccactaacct cgaatgacgt 459

<210> 1382
<211> 319

<212> DNA

<213> *Eucalyptus grandis*

<400> 1382

aaaaaaagaa	gcataaacttc	aacgagcgaa	tctccctctg	tctctgggtc	atctttgggt	60
cttcaggctc	agaacacttg	ctcagactgt	tgttctcaag	gttaaaatgt	catgtcaagg	120
ctgcgctgga	gctgtcagaa	gggtccctgga	aaaaacggaa	ggtgtggaaa	catttgacat	180
cgatctgaag	gaacagaaag	tgacagtcac	gggcaatctg	cagcccagatg	ctgtctcgca	240
aaccgtctca	aagtccggaa	aacaaactgc	tctctgggaa	gcgggaagccc	cagcccaacc	300
cgaagtgaag	cccaccgaa					319

<210> 1383

<211> 408

<212> DNA

<213> *Eucalyptus grandis*

<400> 1383

cttgctttcc	tcttgttggt	ccaacgcaga	gagaagagag	agagagagag	gtggaagaag	60
atcaatctcg	tatctgaccg	gcgaccggtg	gtgctcttca	tcttctccac	ctcatcctct	120
ctctctagag	aaccgaaagc	cggtctcttt	cgctctctcc	ggttcggcat	gaacgggaag	180
gccaacgctc	ccaaggagct	caatgcgcac	cacagaaaga	ttctcgaaag	gcttctcaaa	240
ttgctgaga	acagggaagt	tgctgattgt	aaggccaag	gtccaagatg	ggctagtgtc	300
aatttaggga	tatttatatg	catgcaatgt	tcaggaatcc	atagaagtct	tggggtagac	360
atatcgaag	tccgatcagc	tactttggac	acatggcttc	cagagcag		408

<210> 1384

<211> 315

<212> DNA

<213> *Eucalyptus grandis*

<400> 1384

gcaaaattgg	gcccttctca	aattactggg	aggctcttct	ctaaatgcct	agaaggatcc	60
gatggaagaa	atttgacagt	acaattcagg	accagggtgt	cgctcccgtc	ctttactgga	120
ggcaaatgtg	aaggcgagca	aggtgctgca	atccatgtcg	tcttaatgaa	tcgagatata	180
ggctgtgctg	tcacatcagg	tccagagtcc	tctgtgaagc	ttgatgttgt	tgctcttgaa	240
ggggatttca	acaatgaaga	tgatgacact	tggactcagg	aagaatttga	cagcatgta	300
gtgaaagaac	gtgaa					315

<210> 1385

<211> 375

<212> DNA

<213> *Eucalyptus grandis*

<400> 1385

gttctcgaga	accagctccc	atcccagttc	gacccatctg	agaacaagtc	aaccagatc	60
gtcaaaatcg	aatcttgact	cgaggagaa	gcggagaatg	acgaagcgca	gcgcagccaa	120
ggccgcggcg	gtgcacgagg	gcgagggagc	gaggagcgag	ctgaagtcca	gaggggtgag	180
gaagaggaa	tggggcagct	gggtctccga	gatccgctg	cccaacagcg	gggagagga	240
ctggctcgcc	tcttcagaga	cccccgagaa	ggcgcccgcc	gccttcgagc	ccgccccttt	300
ctgctctggc	cgcccgcgag	cgaagctcaa	ctcccccgcc	agcccccccg	agatctccgg	360
cgcgcgctcc	ctctc					375

<210> 1386

<211> 332

<212> DNA

<213> *Eucalyptus grandis*

<400> 1386

ccgaatacca	ccaccgcgaa	aatgatgatc	ggcgagtccc	gccaccaccc	cctccacccc	60
acgacgggtt	gcattccctc	tccgctgtgg	ccgtccctcg	acgatcccg	cgacgagatc	120
tccccgcctc	tcgacgcgga	ccacctcgcc	gcgctgcgag	ccgcttctag	tccgtacgct	180

ctgcaggaca	tcctcgcgcg	gctgcgcgcg	caccagtcgg	accgcggactc	cgacggccccc	240
gactcgcgcg	tggacctcta	cacgtccgat	cacttcgcga	tgtacgagtt	caaggtccgg	300
cggcgccgcg	cgccgaagtc	ccacgactgg	ac			332

<210> 1387

<211> 320

<212> DNA

<213> Eucalyptus grandis

<400> 1387

ggaacctttt	tgggtttttt	ttggcgctcg	ggcaccgggt	cgggagtttg	gctgcaatgg	60
ctggmtgagg	cacagaaatga	ggttgcaagta	tcaggtgcct	tgttcaccgt	tcccaatcgt	120
ccttccaaag	ttgggtcaca	attggaagct	gtggataatc	tgaagaggtt	gcaggtctcg	180
gaaaatgacc	agacacccaa	ggtgaggaag	ccttacacca	tctccaagca	aagagagaaa	240
tggacggacg	aagagcatga	gaggttcctt	gaagctttga	aactgtatgg	cgcgggttgg	300
cgtcagatag	aagagcatgt					320

<210> 1388

<211> 409

<212> DNA

<213> Eucalyptus grandis

<400> 1388

ttcagttagt	gctcttccac	cctctaaagc	ctcatttctt	cgtcgcaacg	cagcagttacc	60
gtccggatatt	acaacctgtc	cgagcaaaaa	ttgttgaaga	cgtcgacgcc	tggtatcaaa	120
tggatattctt	ccatggatct	tcacccgtcg	ggcgatcacc	tcctcgttgg	tggctacgac	180
cgaaaactgt	gctggtttga	cctggaactc	agtgcacacg	calacaagat	tttacgatat	240
cacacacgct	ccattctgtc	tttggcggtc	cacccaacat	atccactatt	tgcgtcctcg	300
tccggacgacg	gcgctatcca	ggtgttccat	tcacagagtg	ataacgacct	gatgacggat	360
cctttgatcg	tcctcttgaa	aattctccga	ggacatactg	taaaaggaa		409

<210> 1389

<211> 313

<212> DNA

<213> Eucalyptus grandis

<400> 1389

cggactcggg	ctcggccgag	tcaacccacg	ccccccgcga	gtcccgcacc	cccgccgcca	60
tgacgcggcg	atgctccacc	tgctgcaaca	agggccacaa	ctccaggacc	tgccccgtcc	120
gcggcgcccg	cgtcggcgcc	ggggacggcg	ggggcgccgc	ggccgcgcc	tcctcctcct	180
ccccctccac	ctcctcctct	ggcgccggcg	cggcgccggc	ggcctcggcc	tcggcgccgg	240
gggtgaagct	gttcgggggt	aggttaacgg	acgggtcgat	catgaagaag	agcgcacggc	300
tgggggtgct	gtc					313

<210> 1390

<211> 329

<212> DNA

<213> Eucalyptus grandis

<400> 1390

cgagaatcca	gctccatccc	agttcgaccc	atccgagaac	aagtcaaccc	agatcgtcaa	60
aatcgaatct	tgactcggag	gagaagcgga	gaatgacgaa	gcgcagcgca	gccaaaggcg	120
cggcggtgca	cgagggcgag	ggagcgagga	gcgagctgaa	gttcagaggg	gtgcggaaga	180
ggaagtgggg	caggtgggtc	tncgagatcc	gcctgcccaa	cagccgggag	aggatctggc	240
tcggctccca	cgacaccccc	gagaagcgcg	cccgcgccct	cgacgcgcgc	gccttctggc	300
tcggccgccc	gcgcggaagc	tcaacttcc				329

<210> 1391

<211> 156

<212> DNA

<213> Eucalyptus grandis

<400> 1391
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 ccatgccttg cggcggggtcc acttcgggct cgccgagggc ctccaggatc cgaccggggg 120
 tctacagtat gccacgacg cgcgacacagt ccaccc 156

<210> 1392
 <211> 555
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1392
 gaagctcgac acgcgatttc cggctgcaag gatcaagaag ataatgcaag cagatgaaga 60
 tgtagggaaa attgcatatg cagttcctgt totagtctct aaagcattag aattattttt 120
 gcaagacctt tgtgaccgta catacagat aacacttcaa aggggagcaa agactatgaa 180
 tctcgctgat ttaaacgatt gtgtgcnaag ctataatgtg ttgtatttcc tgaggggagat 240
 tgtcagcagg gttcctgact atgggtcatg tcactggtct tcagatgctg tctctgagga 300
 tagaacaagt tccaggagaa ggaagggccc catcgatgat ggtaatgaca ctgatgagga 360
 atccaaagag agcaggatgc ttgagatggc ccatactggc agcagtgcca gaggaagagg 420
 ccgtggccga ggaagaggcc gcgggcggtg tggccgagcc actgagaggg agactcgcca 480
 ccatgaaact gaatcatctg agccgaccac atctctgcaa cctgtcaaca agaacattgt 540
 caatcaagga acagt 555

<210> 1393
 <211> 525
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1393
 cgcggatccc gcgagcgtct cccccaagt ccccttcggc taagcgcgc cgccggattc 60
 cggggccatc tcccccgaat gcccccctcg ctacgactcg cagacgttca agctcggccc 120
 tctcagctgc atgactctgt gcccccctct gttcgtattg gccaaatgcg tgcctctgtc 180
 tcaactcttc tgcaaggcat gtatatgtcg atttaaggac tgcctactct gtggagctga 240
 tattgagggc acagaagccg actcgaatct tcagagcaca gttgatcggt ttatcgagg 300
 ccatggtaga attaagaggt cccatgttga gaatgttgat aaagaggag ttacgcgcaa 360
 ggagacgtg atatatgagg acgtgtcttt ggaagagggt gctttcttgg ttcaacaagc 420
 catgcccggc tttcgtgctc aaaatgtgga aagtgcacaa tcaagactca gtgtctgtgc 480
 tgaggatcac agagatcaga taacaagaac aggcagcacg tcaga 525

<210> 1394
 <211> 443
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1394
 caatgtgtgg gggcgccatc atctccgact tcatcccaaa ccagaggggc cgccgattga 60
 cctcggactt cctgtggccc gatctgaaga gatcgccgg caagcagtcg aggcggcccg 120
 ccaggtcgga ggtcgtcgat gtcgtggagc atgacttcca ggcgcgactc caggggctca 180
 aggacgagtc cgactcgag gacgacttcg acgagaggt cgaggtcgac gtcgaagccct 240
 tcgctttctc cgccgcggag cctcggtact ccaaaggctc ttcaaccacc aaatctgttg 300
 agtataatgg gcaagctgag aaatctgcca agagaagag gaagaaccaa tataggggaa 360
 tcaggcagcg tccatgggga aaatggggtg ctgagatcgg tgacccaagg aaaggggtcc 420
 gagtttggct tgggacgttt aac 443

<210> 1395
 <211> 409
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1395
 ccgaaatggc ccagttggta tgcggaggct gccacacctt actcatgtac atccgaggag 60

cgacaagcgt	tcagtgctcc	tgttgcacac	cagtcacact	agccttggaa	gcaaatcagg	120
tggcacacgt	caactgcggg	aattgcagga	tgctcctgat	gtaccaatat	ggcgacagg	180
cggtcaaatg	cgctgtttgc	aattttgtta	catcagtttg	tgcttcgtca	agcacactgg	240
aacagaagtt	caccagctag	aattagcaat	aaacctaccg	gtcacaggcc	tcacaactca	300
tggttataag	actttctattc	tactgcccgt	gccgcggcca	ctgcacatca	gcgtcatgaa	360
cgcaagctga	gaaaatccct	actagtttta	cttgatata	gttaaaatc		409

<210> 1396

<211> 462

<212> DNA

<213> *Eucalyptus grandis*

<400> 1396

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ccgtccactt	ccttcttccc	acctccatct	tcactctctc	ctccctctct	ctctctgaat	120
ctaccgaact	cttctcgccg	aaggnnnatn	agagagagag	agagagagag	agacgggaag	180
accatcgctt	tcggccatcg	cgtgcacgag	cagtcatgag	gagaggcgag	tcgcgcggcg	240
cgcccgcgaa	gaggggaggcg	gccgagatag	cgcccgccgc	ggtgccccat	gcggctcgcg	300
cgccgcggcg	ggaacccaga	tacaggggcg	tcggcgaggaa	gtcgctgggc	cgatacacgg	360
ccgagatcag	agacccccgg	acgaagaagc	tcgtgcggct	cggcactttc	ggctgcggcg	420
aggaaagcgg	cgctgctgtt	cgaagccaag	gccctggggc	tt		462

<210> 1397

<211> 407

<212> DNA

<213> *Eucalyptus grandis*

<400> 1397

ctctcgctct	gcaattttcac	aacgagtcgg	tcagtagtag	gacctcattc	acagctccag	60
aaaccgcaaa	agatgagcca	atccaccatg	ttggtagcgg	aagagacatc	attttctccg	120
ccccctttgt	ataacccagc	aaacccatccc	cacgacggcg	cctctggggt	caaccggctc	180
ctccaccagg	agcactgggg	cgacctccct	ctccagctca	acgactccga	tgacatgctc	240
atctacaact	ccctccacga	cgccctccac	tcgggctggg	cccccttcga	ctccgctcatc	300
accgcgctcc	accccgagcc	ccagccccac	ccccctctcc	ccgcgcttcc	cgctccccacc	360
tccttcgctc	ccgacgagcc	ctgtcgctcc	acaacgcttt	cgccctc		407

<210> 1398

<211> 456

<212> DNA

<213> *Eucalyptus grandis*

<400> 1398

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gagacgcgat	cctccgcggc	cgccggcgatg	gccccagctt	cattccctgc	gctagcaacg	120
catcttcaatg	gaagtatgct	caatgatact	aactcatctg	gtgaaagcta	cacacgtaac	180
ggaagggcac	gaggagatgc	gagggggaagg	aatcaattac	ttctcgctta	ctggcccaag	240
ataacagatc	aagagctaca	acaaatctca	ggagactcga	actctgtaat	cactcctctg	300
tttgagaaaa	tggtgagtcg	tagtgatgca	ggtcaaaattg	gacgtttagt	gctgccaaag	360
aaatgtgcct	agggctattt	tcctgtctatt	ttcagcgttg	aaggattgcc	actcaaaagt	420
caggatgccca	aaggctcgga	gtggatattt	caatta			456

<210> 1399

<211> 474

<212> DNA

<213> *Eucalyptus grandis*

<400> 1399

aagttgagga	agtcgagttg	gagttctcgg	aggggtgaaat	ggcggtctga	ttgagggcct	60
tggtggggct	tgattggaag	gatttgatgg	agctgttcat	tcctaaaggca	ttgtcttctt	120
gagatcgagg	cttcaaacca	gcagcgtcct	tggtggattt	gggtggcgcc	ctgcgagtcg	180
tgccgttttc	agacccagct	tgctctcgcc	tcctgtgctc	ttccaaagtac	cttccattcga	240

ccatgggctt	ccagaggcga	accgagcgt	tgatgaacca	gttagacacc	tggctcctgg	300
ttagtccgc	ttgttttgcg	agcatgtgtt	tgccgaatc	tttgggatag	ctgcaattgc	360
aacacgcga	aattgtgaat	gtacaattgc	aactcaaa	taaagcgtgg	tcgtcaacca	420
tgaacatggt	ttaaattact	cctatgatct	acagttgac	gaacttaact	ttgg	474

<210> 1400

<211> 443

<212> DNA

<213> *Eucalyptus grandis*

<400> 1400

gccccgtctt	cncaaggcc	atcgccgagc	tccaaggcca	ctccggcctc	gcgcggctca	60
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cgaacgcggg	ctctgtgtac	ttcgacggcc	acctcctcgc	gatgtccgag	gacgaacctc	180
ctacaccagt	gcgcgtcaac	cgctccggcg	acctcgagac	cgctccggcg	tacgaattcg	240
ccggccagct	cgactctccg	atgatcgccc	accggaagat	cgaccggcgt	tcggcgagaa	300
tgttcgcctc	cgactcggac	gtcgtccgga	agccgtacct	caagtaactc	cgattctcca	360
aggacggcga	gaagtccccc	gacgtcgaga	tccccctggc	tgagccgacc	atgatgcacg	420
atttcgccat	caccgagcgc	ttt				443

<210> 1401

<211> 481

<212> DNA

<213> *Eucalyptus grandis*

<400> 1401

atgagctgag	aatagccgaa	gcattggatgt	ggagatagcg	gcgacagcgg	cggaagcgtg	60
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agcgacatct	tatccctgcc	gctcgccacg	tcgcgatgct	gctccttctt	caacacattta	180
taactgcgcg	cgccactcat	ctcggaactcg	ggcgtctcgc	cgccggcgttc	ctctcttctgt	240
ctcttgcgag	aagcatccgc	cgggggccagc	gacggttccg	tcgacgtcgg	ctcgtcgcgg	300
cccgctcga	gcgggaagtgt	caggatggcc	ttgctcccg	ggagcctgaa	cgccggcgcg	360
tcgtaggcct	tcgctgcctc	caccgcgctg	tcgaaactcc	ccagccacac	gcgcgtcccc	420
tcgcgcgctc	ggctgcgctat	ctccgcgcg	aacttcccc	acggccgcgc	gcgcacgccc	480
c						481

<210> 1402

<211> 384

<212> DNA

<213> *Eucalyptus grandis*

<400> 1402

catgaccgga	cgcccgccgc	gaacgactgg	gtcatggaga	ccaggaagaa	ccactcggtg	60
tcggcgccgt	cggttgcgcc	ggctgggctc	acttcagctc	gaatcccgcg	tgggtcaacg	120
gggcccagag	gttgggggat	tgcgggtgcc	gatagggccc	ggcagggcca	gatcttcggg	180
ttcgagacaa	tcgctgcgtg	ccctgttttg	aacggtgtgg	tcgaaactgg	ttccaccgag	240
ccgacttacc	agagctccga	tcgtgattag	ggaaattagg	ggctgttcaa	ttctctgaa	300
tcggagatgg	gatcggttgg	tagggttttg	aatagcgagc	atgacccggc	gtcgtcttgg	360
atctcgatc	cgccagtcac	gatg				384

<210> 1403

<211> 380

<212> DNA

<213> *Eucalyptus grandis*

<400> 1403

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gaaaaaccca	caagcacgcc	atggacaaca	atgttgagga	ataccagaa	tattggggaga	120
cgacctatgt	ctacccaaa	gaagagctcg	acagttgggt	ggacgagggc	atatccgggt	180
actacgactc	gagctccccc	gacggggggc	cgtcgaccgc	tgcttccaag	aacatcggtg	240
cgagagggaa	ccgaaggaag	aagctcaacg	agaggctatt	cgcattgagg	gcggtggtgc	300

ccaacattag	caagatggat	aaggcatcca	tcatacaagga	tgcgattgac	tacatccaag	360
agttgcacga	tcaagagaga					380

<210> 1404

<211> 432

<212> DNA

<213> *Eucalyptus grandis*

<400> 1404

ccaacatcgt	tctcagaaac	cccactccat	cccagttcga	cccatctgag	aacaagtcaa	60
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cgagccaagg	ccgcggcggt	gcacgagggc	gagggagcga	ggagcgcagct	gaagttcaga	180
gggggtcgga	agaggaagtg	gggcaggtgg	gtctccgaga	tccgcttgcc	caacagccgg	240
gagaggaatct	ggctcgggtc	ctacgacacc	cccagagaagg	cgggccgcgc	cttcgacggc	300
gcccctctct	gctcggcgcc	cccgcgcgcg	aagctcaact	tcccgcgcag	ccccccggag	360
atctcgggct	cgggcgtccct	ctccccgat	gagatccagt	cgggccgggc	gagctacggc	420
aacttcgggg	cc					432

<210> 1405

<211> 345

<212> DNA

<213> *Eucalyptus grandis*

<400> 1405

ccgacctcct	ctctccacgc	ggccactgtc	ccgtcgcgcg	aattcgcccc	gccgtcgtag	60
gagacgcgat	ccctccgcgc	cgcgcgcatg	gccccagctt	cattccctgc	gctagcaaac	120
catcttcaatg	gaagtatgct	caatgatact	aactcatctg	gtgaaaagtca	cacacgtaat	180
ggaagggcac	gaggagatgc	cagggggaagg	aatcaattac	tctcctgtta	ctggcccaag	240
ataacagatc	aagagctaca	acaaatctca	ggagactcga	actctgtaat	cactcctctg	300
tttgagaaaa	tgttagatgc	tagtgatgca	ggtaaaattg	gacgt		345

<210> 1406

<211> 471

<212> DNA

<213> *Eucalyptus grandis*

<400> 1406

actgggcaaa	atattcttat	ctctactgca	tatatagggc	tcgggagaga	gagagagaga	60
gagagactgc	acagtatatg	aataactaat	aatacacctc	ctttagactt	gactgaagat	120
acaggcacaa	ccctagtaag	agaagaagga	gaaggggaag	atgaaggtga	gaaggaagct	180
gagggagccc	aggttctgct	tccagacgag	gagcgaggtg	gtatgtgttg	acgatggcta	240
caaatggagg	aagtacggcc	agaaagtgg	caagaacagc	ctccacccca	gaagtattat	300
ccggtgcaat	cacagtaaat	gccgagtgaa	gaagaggggtc	gagcggttgt	cggaagattg	360
tcggatgggt	ataacgacct	acgagggcag	acataaacat	tccccgtgc	atgactcgaa	420
ttcatccgaa	catgaagggt	tcaactcggt	ctagtattgc	cccaagacag	a	471

<210> 1407

<211> 471

<212> DNA

<213> *Eucalyptus grandis*

<400> 1407

agcaagcaaa	agaggaaacc	agataaaaag	agacacctcg	gtttcacggt	ctctactaca	60
gaattccgga	gatggtgaag	agagacagag	aggacacgga	ggtcgaagcc	ctggccctgg	120
ccaactgcct	gatgctcttc	tcccagatcg	gcgagagcac	cgactcgcca	tggtcgaacc	180
acaaatcccc	gcctacggag	cggatgttgc	cgtgcaagac	gtgcaaccgc	gagttttcat	240
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cttttcaact	agggcgctcc	gcggatttct	caccgggccaa	gcggaagacg	cagaggtcgg	360
ctatatcgcc	gctcagtttc	ccgcttggca	agcccttggc	ggtcacatga	ggaggcacag	420
ggccgccatg	gcggagagct	tggcgacggc	cgaaaagcct	gtgcggtgt	t	471

<210> 1408
 <211> 303
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1408
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 gtatctccta gtttttagct ggatggggat ttctcttcgc actatggcga cactccggt 180
 cccacgttga aatacataaa tcagatgctc atggaggagg acatagatga caaacctgt 240
 atgtttcatg atccttttagc tctcaagctg cagagaaatc cttatacatg gctctctgtc 300
 cga 363

<210> 1409
 <211> 367
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1409
 aatctcagga gactcaaaact ctgtaatac tctctctgtt gagaaaaatg tgagtgtctag 60
 tgatgcaggt aaaattggag gtttagtgct gccaaagaaa tgcgtccgag cctattttcc 120
 gcctatttcc cagcctgaag gattgcgct caaagtccag gatgccaaa gctcggagtg 180
 gatatttcaa ttctgattct ggcccaataa taacagttag atgtatgttc tggaaaggag 240
 cagcgcgtgc atacagttca tgcagttgca agcaggagac atagtacat ttagtcggt 300
 agaaccgag ggaataattg tcatgggatt cagaaaggct tcaactgctc cctcatctga 360
 tcaggaa 367

<210> 1410
 <211> 353
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1410
 cattaccacc accaccacca aaactctctc tctacccttc tctctctgcc cttctctctc 60
 tagaatttat ggcgatgaag gagaaggcgg gtccggcgcg cggcgccag ctggcggtga 120
 gggaggcgca ctaccggggg gtgaggaaga gccgtgtggg gcggtacgcg cgggagatca 180
 gggaccggca gaagaagagc cgggtgtggt tcggcacctt cgacacccgc gaggaggcgg 240
 ccgcgcctca cgaactcgcc gcccgcgact gcccgggctc caaggccaag accaacttcc 300
 cctctccctc ggagcgcccc gtctctctcc tcgcccggag cgacggagga gca 353

<210> 1411
 <211> 586
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1411
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 tcccggtcgg cgaattcgcc ccgcgctcgt agggagacgc atcctccgcc gcccgggcga 120
 tggccccagc ttcattccct gcgctagcaa cgcatttcaa tggaggtatg ctcaatgata 180
 ctaactcatc tgggtgaaagt cacacacgta atggaaggcc acgaggagat gccaggggaa 240
 ggaatcaatt acttctctgt tactggccca ggataacaga tcaagagcta caacaaatct 300
 caggagacac gaactctgta atcaactcctc tgtttgagaa aatgttgagt gctagtgtg 360
 caggtaaaat tggacgttta gtgctgcccc gaaaatgtgc caggggcctat ttccgctcta 420
 ttctcagct tgaaggattg ccaactcanag ttccaggatgc caaaggctcg gagggtgat 480
 ttcaatttgc attctggccc aataaataa gtagaatgta tgttctggaa ggagtacgc 540
 cttgcataca gtccatgcag ttgcaagcag gagacatagt gacatt 586

<210> 1412
 <211> 427
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1412
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 cgtcttccgg ttggtgtttc ggggaagccat ggatcttgag tacccagaag agttcttggg 120
 cgggtgccac gaccacccat cgagatctc caagggcaag cgacgaagc gccagcgcc 180
 ggctctcccc agcggcgggc gctgcgtcgg cgccgacgcc ggctgggcca ccgggagggc 240
 cggcttctac gtctacgagt gcaagacttg cagcccgctg ttcccgctgt ttcaagcgct 300
 agggaggcac cgtgccagcc acaagaagcc caagtccacg gccgacccgt accagaaaa 360
 caagccgctg acgggtggtc tgggcttggg cgaattgac gacgaagacg agggggcactc 420
 cggtaaa 427

<210> 1413

<211> 375

<212> DNA

<213> *Eucalyptus grandis*

<400> 1413
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 cgagatctga tagagaaacct gcatgttagt cagcaattct gagctcgtag gttcttcgca 180
 ctgtagcttt cggtaaatta tgctcccgga aaatttcaat ttccgctcaa gcccttccaa 240
 gaggtaaaga ccaagacgct gaatcgggtc gccataacc gacacacatt gctccagcat 300
 atccattaga gctcgtgcac tagaagatc ggcatcagag attgcccttg ccaggcgatc 360
 accacttggt tcaag 375

<210> 1414

<211> 369

<212> DNA

<213> *Eucalyptus grandis*

<400> 1414
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 tcaagacttg acggcagaag agcttgaaga tatgctatct aataataatc cagcactctc 120
 taagaaagct aaggctccta aacaagagaa tatggagaca ctggaggggc tggatactct 180
 tgccaacctt gcaatcttag gagaaggcga ggtgctccca tcatctctct catcatctca 240
 agccacaaca aagcaccctc gacacgcgac aggggtgttc tgtattgttt gtatacaacc 300
 cccagtgga aaggggccaa aacacaagcc aacatgcaca tgtaattgtct gctcgcacct 360
 aaagcgct 369

<210> 1415

<211> 313

<212> DNA

<213> *Eucalyptus grandis*

<400> 1415
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 ttcttccggg tggaggagga ggaggagctg gaagaggatg gcgagcgggc aggaatgggg 120
 ggagcgcgag tgccgcgggg gtcccgagg gcgcactggg tcggagtcag gttccgccac 180
 tggatcacc atccaatcg atcggggcaag ggctcacoga tattggaggg ttcaacagcc 240
 atgaagaaga tcaggaaaag gccgaggtcg cggagctccc agtatagagg ggtcactttt 300
 tacaggcgaa ctg 313

<210> 1416

<211> 489

<212> DNA

<213> *Eucalyptus grandis*

<400> 1416
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 actgtcccg cgcgcgaatt caccggcgcg tcgtaggaga ccgcatccta ccgcccggc 180

gcgatggcgg	gcgccagcgg	agatgccagg	ggaaggaatc	aattacttcc	tcgttactgg	240
cccaggataa	cagatcaaga	gctacaacaa	atctctggag	actcaaacctc	tgtaatcact	300
cctctgtttg	agaaaaatgt	gagtgctagt	gatgcaggta	aaattggacg	tttagtgctg	360
ccaagaaaaa	gtgccgaggg	ctattttccg	cctatttccc	agcctgaagg	attgccgcctc	420
aaagttcagg	atgccaaagg	ctcggagtg	atattttcaat	ttcgattctg	gcccaataat	480
aacagtaga						489

<210> 1417

<211> 372

<212> DNA

<213> *Eucalyptus grandis*

<400> 1417

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ctctcgacgg	cacctctctg	cgatgtccga	ggacgacctc	ccctaccacg	tgcgcgtcac	180
cgctcccgcc	gacctcgaga	ccgtcggcgc	ctacgacttc	gccggccacg	tcgactctcc	240
gatgatcgcc	caccogaaga	tcgacccggc	ttccggcgag	atgttcgcc	tcagctacga	300
cgctcgtcgg	aagccgtacc	tcaagtaact	ccgattctcc	aaggacggcg	agaagtcgcc	360
cgacgtcgag	at					372

<210> 1418

<211> 354

<212> DNA

<213> *Eucalyptus grandis*

<400> 1418

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ttagctgaca	ttttctgatg	gggtctactt	tgtgctccga	cgggaataaa	gcctgattct	120
aaatctcctg	gttctagatt	taggatgccc	tcaataaatg	gggcaagcca	gaatgtacag	180
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ataagaagga	agtctgtggt	ctgaggaacc	ttctgtgttc	ttgtgcacaa	gcagttgcgc	300
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<210> 1419

<211> 540

<212> DNA

<213> *Eucalyptus grandis*

<400> 1419

ctcaatcgga	gttgggctgg	ctgtgatatc	tgtgtccgcg	gccaggggcg	ccatgctttt	60
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atgagtcagg	ctttttgcgc	ctgtgtgtgc	ccatgtgttt	cttcaaatgg	cccttcaatg	180
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tcgtcgagga	ttcaggagat	ccagcaggat	tggagataac	tggctcatcc	acaggcaaca	480
acgcgatttc	ggcgagattt	tccatcaggga	tgggtctccac	agtgaccgga	gggccccctg	540

<210> 1420

<211> 349

<212> DNA

<213> *Eucalyptus grandis*

<400> 1420

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gaacaagaga	gaaagaaagg	gggtccttgg	acogaggaag	agcacaagct	ctttttgatg	120
ggctctaaaa	aatatgggaa	aggtgattgg	agaaaatcct	ccaggaaact	cgtgatcagc	180
agaaacccga	cgcaagtagc	tagccacgca	cagaaatact	tcatacagaa	actttcaggt	240
ggaaaagata	agagaagggc	cagcatccac	gatatcacaa	ctgtgaacct	cacagagaat	300

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<210> 1421	
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<213> Eucalyptus grandis	
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agatgcggga agagctcgag gctgcgttgg atgaattacc tgaggcccca catcaagaga	300
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<213> Eucalyptus grandis	
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gaactaaga agcagatcat ggataaagaa tgtatcccg ggtatcaaga tcgcaagatg	360
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<210> 1424	
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<213> Eucalyptus grandis	
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tgatcaagaa gaagaccocg agcccgagca aggccctgat tcgccctcct cgggggaaga	180
ctccaangtg aatgctatcg agccgtcnca aaagagaagg aagagcgtga agaancagat	240
gggtgcgggt ccgatccggc gcgaccccca gggatccaag agcaaaaggg aggcctaaccc	300
gcgtccgat tcgtggggcg ggaggaaagta cggccaaaag cccatcaagg gctcgcctta	360
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gcgca	425
<210> 1425	
<211> 434	
<212> DNA	

<213> *Eucalyptus grandis*

<400> 1425

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gcggcgagtc	gtctcgctt	gataagagga	gcgatgtctt	cttggttggt	gcttctaagg	180
aaaagggaag	tccgaggctg	gcgatgccgc	agcagcggag	gaagagcagg	aggggaccga	240
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cgcacatatg	ggactgtgga	aaacaagtgt	atttgggtgg	attcgacact	gcacatgctg	360
cagctagacc	tatgatcgag	ctcaataaaa	ttcaggggct	tgatgcaaca	taaatttcaa	420
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<210> 1426

<211> 414

<212> DNA

<213> *Eucalyptus grandis*

<400> 1426

gcaggtatga	actctccttt	agcccagctt	gttaaccctaa	gaaggatgca	cacctacgag	60
ccatttgacc	agttccccat	gtggggagac	accttcaaa	ctgacaaagt	taaaaaatctt	120
gaggcatcgt	catctgtgat	tgtgcatgca	gtagatgatg	gattggacaa	gaagtttgaa	180
tatgtttctc	atgaatcgcc	agaaaaattcc	agctccagga	gcgatcaaga	agcaaataga	240
ctcgacaaag	tacagagacg	tctagcacag	aaccgtgaag	ctgctcgaaa	aagcgtctcg	300
cggaagaaga	aatatgtaca	acaactagaa	tcaagccgct	tgaagctagc	acagttggag	360
ctggaactcg	ggagagctag	gcagcaagg	ttgctctctg	gaattggatt	cgac	414

<210> 1427

<211> 332

<212> DNA

<213> *Eucalyptus grandis*

<400> 1427

aaaagcccta	gctaatacaa	ttaacaagcg	ctaactcctaa	aagcacaggc	gaagatttca	60
ctgtttctgga	gagagcttga	tccttcagggg	cgctcgagaag	cgcggtctct	tcgaggggtg	120
ggggctctcc	acctcgtcgt	cgcccgacac	gatgaaccgg	gtcgggaaat	ccggcagcgc	180
gggcacgttc	aggtcgaaagt	tgcggcgcc	gctgtcgtat	ccgagcgccg	cgggggccgc	240
ggaccccaac	ccctcggaag	tggtgacccc	gctgttgccg	gagccgctgg	cgccgccatc	300
gtagtggcaa	cgcttgctgc	cgcccaaggc	ct			332

<210> 1428

<211> 318

<212> DNA

<213> *Eucalyptus grandis*

<400> 1428

gatccacca	actggccaca	gcagcaagca	aatcaacaat	caggagcaag	cagtgagatt	60
ctctcagcttc	cgctgccgcc	gccccctctg	ccagccggag	ggggcggtac	aggctccatc	120
cgccaggtt	ccatggccga	tcgggctcgg	ctggccaagg	ttccgcagcc	cgagcctgga	180
cttaagtgc	cccgatcgca	ctcgacaaac	accaagttct	gctaactcaa	caactacagc	240
ctcagcaaac	cgcgccactt	ctgcaagagt	tgccgcccgt	actggacccc	aggaggtgag	300
tgaggaaagt	gccagtcg					318

<210> 1429

<211> 349

<212> DNA

<213> *Eucalyptus grandis*

<400> 1429

gaaagcctaa	agaaagcaga	tacaacagga	aaaggaggac	accaatacag	atggtttttac	60
agaaagattc	acaagaacta	aaccgtcgct	gatcttaggc	acgagtcagg	ctgcttgagt	120
ggcgccatcc	ttgcagttgt	cgagatccga	ttcattgact	gaagaaggcg	ccttgataaa	180

tgtgtgactgt	cgagatgttt	ccccgagaaa	cttcaaagag	agtggtgcag	gttcattctc	240
agcaagactt	agctgagaca	ttccaactat	ttggctcgata	tttaggggtt	cttttggaa	300
tactgggatt	ggcttttagca	cacgggtgatg	agatgtctcc	accacectt		349

<210> 1430

<211> 350

<212> DNA

<213> Eucalyptus grandis

<400> 1430

aacgcgcgtt	ctccacaaca	agcgactctc	tctctttctc	tctctctctc	aactaaaatc	60
ccaagctctc	caagtctctc	cgaccatggc	tccccgggag	aggcccaacg	ccgtcacctg	120
cgcgcgcagc	cccaggcccc	agggcggcgc	caaggagatc	cgtctccgcg	gcgtcaggaa	180
gcggcgcgtg	ggcgcctacg	ccgcgcgagat	ccgcgaccca	ggcaagaaga	ccgcgcgtctg	240
gctcggcacc	ttcgacacgc	ccgaggaggg	cgcccgcgcc	tacgacacgg	cggcgcgtga	300
gttcgcgggc	gccaaaggcca	agaccaactt	ccccaccgcc	gacgagctcg		350

<210> 1431

<211> 350

<212> DNA

<213> Eucalyptus grandis

<400> 1431

aaccgacgac	acagggtgaca	agaatcacag	gttcgaaggg	ggccaattgg	gtgttcgagc	60
agcttctgat	tccagtgaca	gatcaaaaga	aaaagccaca	gatcagaaga	ctttacgcag	120
gcttgctcaa	aaccgtgaag	tgccagaaaa	gagtagatta	aggaaaaaag	catatgtcca	180
caactcggag	agtagcaggg	tgaactcac	ccaactagag	caagaactgc	agcgagcccc	240
tccagcaggg	attttcattt	caggtagtgg	agaacaatcc	cactcaatgc	gcggaaatgg	300
tgcctcggcc	tttgatgttg	aatatgcacg	ttggcttgaa	gagcacaaca		350

<210> 1432

<211> 317

<212> DNA

<213> Eucalyptus grandis

<400> 1432

cggggatata	ggtgctggca	ggtttaacta	cttaaatgat	aggtattatt	atcatcacia	60
aggtcggggt	ctggctgtta	atggacatat	gaatgggtact	tattatggca	ctgggaaggg	120
gtcttccggg	ggaacataca	gtactgggtg	tagtanaggc	tggtggtggca	ggtcagacta	180
taagatcacg	agaaaagata	gggaatctat	gcccaacatg	agcgagcctc	ttgttgccct	240
ttgtgatgtt	cctaggaatg	ataagcttgt	gaaaattgat	ggcaacttga	taattcattc	300
tattatggcg	agtgaga					317

<210> 1433

<211> 370

<212> DNA

<213> Eucalyptus grandis

<400> 1433

gctcaatgta	gtoatcaaga	aataaacatc	ctttagcaac	gaaagccaga	aagcctgaat	60
ctctaacgga	aacttacatg	cacgtgcata	ttaggccata	aaaacatgac	agataaaaata	120
caaaaatcc	ttttctaatg	tgtaacattt	ttcggcagat	ttctaatagc	attactcttc	180
atccccattt	tggtgcgcac	cgccctccact	cctgatcgat	tcactctctc	tatcaccttc	240
agcctgacca	tttgctctct	tgaccgtaca	gtggtagtta	atcccatact	cctgtacett	300
gagccagtg	cagcagtaat	tgccgcatta	ttccagttg	atggacgagg	ttttcggcgg	360
tagtatctca						370

<210> 1434

<211> 210

<212> DNA

<213> Eucalyptus grandis

<400> 1434
 gaaaagcgta cgcgaggagg cagcatcgct ggctcaccgg agctaagttag gttgatagca 60
 agactttttc gagagctatt ctgtgaaaaga gtgctcgtag tcagaccctg gtttgcctcc 120
 ctcttctaga cggcgtagtg cgatttggca ccacggaaa ggttcaagag gacatttcac 180
 tcgtcaatca tgtcaaaacc ttcttcgttg 210

<210> 1435
 <211> 557
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1435
 ggtcgttcga caacacccctg tcgctgctga gccgcgcga gcccgacgag gtgtcgcagg 60
 tgccggctcag gccctgcgcg gtcaagtcgg aggaactccga ggagagcagc aagacctcgg 120
 tccccagaga ccgcgcgtgga tgcatacaaga gaagaaagac ttccgataca cagataaaga 180
 tggatcataa tttgattgac gacggggcacc agtggaggaa atatggccag aaagcgattc 240
 ttaactcggga gttcccaagg aactacttca ggtgtactca caagatcgac caaggtgtgc 300
 taagcaccaa acagggtcaa aagggtacagg acgctccgcc cctctatagg accatatacc 360
 agggccaaca cactctcaag aacctcatcc tgaatcccc ctccctcatc ctggactcgc 420
 ccgagccctg gggactcctc catcctcgtc agcttcaaca ccagcctccc tcccaagcaa 480
 gacgacaaca acaacagcag cagcaacccc ttctcctctt cgactttccc gtcggtgaag 540
 cacgagcccg aagctgc 557

<210> 1436
 <211> 438
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1436
 aatcaaacac nctccccaat ttctctctnt aagatccccc cccaaccgcc accctcaatc 60
 ttctctcttc ttctctcttc tcagtgtctg gacaagggtt tccccctcta 120
 ccaggccctg ggccggccaca agccacgcca ccgcaagcac gcctcctccg ccgcggccgc 180
 cgccgggggt gacgaccagc cgaccacctc gagcacctcc gcggcgacga cctcctccgg 240
 cgtctccggg aaggtccacg agtgtctgat ctgccacaag agcttcccc cccggccagg 300
 gctcggcggg cacaagcggt gccactacga ggccccccgc cccatccccg cctcctcttc 360
 cgccccctcc gcgcgccggc ccccgccgcg cagcgggggt agcgtgtcgg agggcggtgg 420
 gtccacgcac acgacagag 438

<210> 1437
 <211> 327
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1437
 ttctctcttc ttctgttttc cgtttttctt ctctctacct ctgcccaaga aaccgccagg 60
 aaagggaaga aggtaaaaag aaaagaaaag gaagccatgg ctccgagaga aaagccacgc 120
 gtccgcgccca tcccaaaccc taacggcgct aaggaaatcc gtttccgggg cgctccggaag 180
 agggccttggg gccgctacgc gcgcgagatc cgggaccctg gcaagaagac ccgggtgttg 240
 ctccgacctc tcgacacagc cgaggaggcc gccgcgccta cgacaccgcc gccccgcagt 300
 tccgcgccgc caaggccaag accaaact 327

<210> 1438
 <211> 360
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1438
 gcgagagcta accgccccaa ttaccacgct ctcatctttc ccaacttcaac aaaaaatccc 60
 gaccgaaaga atgtgtatata atagtcttat ttgatagcat aagaacgggt acataccgtg 120
 tcaaggacct catgaacaa ggatgaaaaa ttgggtaatg cctggaaaaa tctcggcaga 180

cccggtttgaa	gattgttccaa	gggtactgtgc	ctcgctcactt	ccactgcctt	ggaatgttcc	240
agcattctctt	cttctaccct	cctttggcag	gttgcaagtt	caagtttctt	ctcgccgcagt	300
gggtcccgag	catccagcac	ctggccattg	tcgggcccag	gatcagggaa	ccctacacca	360

<210> 1439

<211> 269

<212> DNA

<213> Eucalyptus grandis

<400> 1439

ccgaacgcga	atcggtctctt	gggttttgaag	cgaagccggt	aattatcggt	gaaacggcct	60
cgaaaacctc	gcaatcaagc	aagaagccat	cgctgaagat	cgcggtgcgc	agaaaagtgc	120
agctgtcgca	attctccaag	cgcaatccga	tggttcaagg	aggttcgaat	acgaacgcgc	180
acgagcagag	gcactataga	ggagtccggc	ggaggccctg	ggggaagttc	gcggcggaata	240
tccgagacc	caaccggaag	ggctcgcgc				269

<210> 1440

<211> 351

<212> DNA

<213> Eucalyptus grandis

<400> 1440

aagaagacga	agcagctcat	cgcacatgg	tgttgggtatt	gcgaacgaga	atttgaagat	60
gaaaaagtcc	tcatgcacaa	ccaaaaggca	aaacatttca	aatgtggaat	gtgtctctct	120
cggttgaata	ctgctgggtg	tgttggctgtt	catattcagc	aagtgcacaa	actcgcaacgc	180
gaaaaacctc	cacgtataga	aaatgcaacta	ccaggaagag	atggctacga	agttgaaatc	240
tgttggtatgg	tgggaatccc	agcactgat	gtcgccgact	acaaacgacg	caaggaaatc	300
gaactgggac	tggcagcagg	atccatttca	cagctctctg	ccaagcgctca	g	351

<210> 1441

<211> 476

<212> DNA

<213> Eucalyptus grandis

<400> 1441

gatagtccaa	gctctctgccc	tctctctctn	tctgtattct	ctatcttcat	ctcgccgcctc	60
ttgatcgctc	tcatctcgct	ctcgcgaatg	ttgtctctcg	tcttctctct	tgtccgccat	120
tcaaagatca	ccattctctt	ccgtttgggt	tgcggtgact	aagaactctt	tctctctctc	180
gctctgagtc	actcttgctt	tctcccgact	ttcttggggt	tgtgaaaaat	ggcggaaga	240
tgaaccttgc	cggaccgcga	aacaagcccc	ttgaactcac	ccctccacct	ctccgcttct	300
tctctgta	caccgcagcc	gcgcgcgcgc	gcgcgctcgc	ccgcgcgcgc	ccgcgcagcc	360
ttgagatcct	ccaagcggag	caagcacccg	gtgtaccgcg	gggtccggat	gaggaaactg	420
ggcaagtggg	tgtcggagat	ccgggagccc	cgaagaagt	ccgcacatctg	gctcgg	476

<210> 1442

<211> 315

<212> DNA

<213> Eucalyptus grandis

<400> 1442

gcaagacctt	tgaacctggg	aatcatgtna	aggctgtttc	tggtncccaa	gaaggtgcta	60
ctggatgtgt	tgtaaaggtg	gagcaacatg	cgctgatcat	tttgtcagat	acaacgaagg	120
aactattacc	gtttttgcag	atgatgtgtg	tgaagtttca	gaggtaacat	ntggaataac	180
cagaattgga	gactatgagc	ttcagacact	tgtgctgctg	gataatacca	acttcggtgt	240
cataattcgt	gttgaagagt	aagcttttca	ggtagggtgac	atgcactgag	gcaagctctc	300
tggacatgcc	cttca					315

<210> 1443

<211> 338

<212> DNA

<213> Eucalyptus grandis

<400> 1443
 ctcagccgag cttcagaggg aaacccgcat gccctcgca aagtcactct gccacactta 60
 tcgggaacga taagatgttc atttttgggg tagtgagcca aggcgaagcg aactattgaa 120
 cgacctggat attctggacc tagagacgat gagtgaggat tcctctgagg taaaaggcga 180
 gattctctgt cctagggaca gtacacagcg tgttgccatg gaaaacaat tagtggtgta 240
 tgggtggagat tgtggcaatc ggtatcttgg cgaatgtgat gtacttgata cggacacaat 300
 gacctggtca aagttgactg ttcaaggatt ttcaccgg 338

<210> 1444
 <211> 409
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1444
 gccaaaggca caaccatcaa caccaccacc agtttggcgg tgatcattct tctccctctt 60
 cggtcgccat ggctgggtgc gcagggggtt tagagagnga gaacggcgga aatgggagat 120
 ggctatgca ggagactctc acgtctctcg agatcaggtc cgaggctcga ctctagggtt 180
 aaggaggcca accaaaaggg tcctctttgg gacgaacttc cggattatgt cggagaacaa 240
 tgggtatcaa cggagcggca agaaatgcag ggaataatct gagaaactgt acaagtatta 300
 caagaagacg aatgaacgaa aagcgggtag gcaagacggt tagcactaca ggttctctcg 360
 tcaagctcga agctctctac ggagagaaac ccaatttgaa ttccatctc 409

<210> 1445
 <211> 304
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1445
 gaactgttgt acatggatgg acaggtgac atcaagcagc gccaatctct cattaatgcc 60
 ttcaaatgacc caacgagtag agtgagggtg ttgcttgect ctaccaaagc atgttccgaa 120
 gggattagtc tggtaggtgc ttcaagggtc gtgttactag atgtgtgtgt gaatccgtca 180
 gttgacaggt aggcataaag ccgtgctaca gacttggaca gaagaatcgg gtctatatatt 240
 atcatctgat acctctctgg acaatggatg ctgagaaata ctgtcaacgg gtgttaaaagg 300
 aac 304

<210> 1446
 <211> 332
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1446
 ggctccccgg gagaggccca acgcgctcac cgtcgccgtc agcccaaggc ccaggggcgg 60
 cgcaaggag atccgcttcc gcggcgctca gaaegggcgg tggggccgct acgcccga 120
 gatccgcga ccagcgaaga agaccgcggt ctggctcgcc accttcgaca ccgcccagga 180
 ggccgcccgc gctacgaca cggcgccgct tgagttccgc ggccccaagg ccaagaccaa 240
 ctccccacc gccagcagc tctgtctcgc cgtcgccgct ccgcccgcga gccccagcca 300
 gacgacacc gtcgacaacg cctccccctc gc 332

<210> 1447
 <211> 349
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1447
 gtaaaacaac ctccctcagc tcctcttcac cactggtttt tgagatgate tgtgtgctcg 60
 ggcgcgttga ttaattatgtc ttattctgac ttgctgaacc tgcgtgtttgc cgtggcgctt 120
 tgggtgaacgc cgtatattgc ggctgcccgt ctcgagtcgc tcggggtctt ccataactctc 180
 tggtctgttt gatttcgata gctgttttcc aaggctaaga tgggctacgc acagctggct 240
 atcggccctg ccggcagtg caagtgcact tattgctcga gtttctatca acattgtgaa 300
 gctattgggc ggacaataca cattgttaac ctatgctctg cagcagaga 349

<210> 1448
 <211> 362
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1448
 ccgcaacgag gcgataccat ctcgggcccgc cgtcttgctc ttcctctctc aatcccatcc 60
 atccctccat ccateccatc atccgcccga accctccctt tctctctcca tctctctcgc 120
 gcagcatgat tccgagccga gccgcccgcg gcgccgacga cgtcccgcaa gtccgccgat 180
 cggcaccgaa ggggcacgta caacagcagc agcagccgca gcaacaggct ggccgccgga 240
 gcccaagtac aagggcgctgc ggaggcgccg gtggggcaag tacaccgcgc agatcagcga 300
 ccccgccaag aaggcacgcg tctggctcgc caccctcgcc tcgccgagg agggcgccgc 360
 gc 362

<210> 1449
 <211> 281
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1449
 cagcagacga gaccattcca ttccattcca ttctcgattc tctactacag actcgcagag 60
 atggtgaaga gagacagaga ggcgcccagg tcgaagccct ggccgngggc aactgcttga 120
 tgctctctcc ccgagtccgc gagtgcgcgc actcgaaccg cgaatccgcg tctacagagc 180
 ggaatgttcg gtgcaaaagc gtgcaaccgc gaggctctct cattccaggc gctcggaggg 240
 catagaacca gccacaagaa gcagaagctg atccccgcgc g 281

<210> 1450
 <211> 389
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1450
 aagaagacga agcagctcat ccgaccatgg tgttggtatt gcgaacgaga atttgaagat 60
 gaaaaagttc tcatgcaaca ccaaaaggcaa aacatttcaa atgtggaatg tgtcctcgtc 120
 gtttgaatac tgctgggtgg ttggctgttc atattcagca agtgcaacaa ctcgaaccgg 180
 aaaaccttcc acgtatagaa aatgcactac caggaagaga tggctacgaa gttgaaatct 240
 ttggtatggg gggaaatcca gcacctgatg tcgccgacta caaacgacgc aaggaaatcg 300
 aactgggact ggccagcagga tccatttcac agcctctcgc caagcgctcag aaaatggatc 360
 accggccgat atctcagagc gaattgaag 389

<210> 1451
 <211> 381
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1451
 gctgcgctgc ccttccctt ttgaccgttg ctcctcccc ttctctctct accaacgtct 60
 ctctctctct ctctctatct gcactgtgat tccctcacct tctcgcagcc tcgcoactct 120
 cctctctccc aactcctcgc tctctcgtct gctcgtaca gtccagatat ttcgcgatca 180
 atctcgaaca gctcagcgag atccttatgt atctggtgat aagcataaga gaacacacct 240
 gtgaattccg ttccgatttg cattttaaaa gttcatagtg tgaagagagt tggaaatctg 300
 aggtgcaaga tgggtgttct ctcatcaaa cttgacgatg aagaggcggt caagctatgt 360
 aaggatcga agcattcat t 381

<210> 1452
 <211> 381
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1452

ggcgagctct	cttattcttct	tcttctctct	gctccacctt	aaacctctgc	ccggcaaaaac	60
cgattcgagg	tcgagagtgc	agtaaaagatg	aattgtggaga	agcttatgaa	gatggcgggt	120
tcagtcgcga	ctgggtggaaa	gggtacctatg	agaagaaaaga	agaaggctgt	gcacaagaca	180
actaccacgg	atgacaaaag	gctccaaaagc	actctcaaaa	gaattgggggt	taattgctatt	240
cctgcaattg	aggaagtcaa	catctttcaag	gatgatgttg	tcatccaatt	tglaaatccc	300
aaagtccaag	ccctctattgc	agccaataca	tgggtgtgtca	gtgggtgctcc	tcagaccaag	360
aaattgcgaag	atatctctccc	a				381

<210> 1453

<211> 378

<212> DNA

<213> Eucalyptus grandis

<400> 1453

tttttttttt	tttttttacgc	aatggaagaa	caaactgttt	tccaactgaa	agtacaaaata	60
actccttaac	tagaattagg	taaattgctta	aatcctgcta	cctacaaaatg	tgaaccacga	120
tgacaagggt	cccaacacca	aattgtttggt	acgatgtgaa	aacttgacga	cctgacagca	180
attagcatat	accaactcaa	cgaaactacg	agggggagag	agcttatggg	cacggcacca	240
gctatatcaa	gtacgcactc	tcttattgct	gcaggaggga	cacttgtact	gcttgatgtg	300
ctcagccctg	gcgggagtaa	ttttcacgca	tttcccatgg	aaccacttct	cgcaatgtgc	360
acaacagatc	cagaactc					378

<210> 1454

<211> 339

<212> DNA

<213> Eucalyptus grandis

<400> 1454

atgctgtctgc	cacgaacagc	cgctttacaa	tcttttacaa	tccaagggcc	agtcacatcg	60
agtttgtcat	acctctggca	aaatatgtga	aagcagtcata	tccacacaagg	gtatctgtgtg	120
gcattgcgatt	cagaattgctt	tttgagacag	aagagtcaag	cgcttcgtaga	tacatggggga	180
cgataacagg	catttagtagt	ctggatcctg	tctgctggca	aaactcacatg	ttggcgttcag	240
taaaaggttgg	atgggtagag	tcaactgcag	gtgagaggga	gccaaagagta	tcctttgtggg	300
aaatttgagcc	actaaacaaca	ttcccaatgt	atccttctc			339

<210> 1455

<211> 372

<212> DNA

<213> Eucalyptus grandis

<400> 1455

gtcgggtgtta	ggagattaat	gagacagcaa	agtaacatgc	cattcctctgt	tatatctagt	60
cacagcatgc	atctttgggg	tctggccact	gcattctcatg	ccatttgcac	tgggaactctc	120
ttttctgtat	tctacaaaac	aagaacaagt	aggtcagagt	tcatctgtgag	tctcaataaaa	180
taccttgaag	cacggggcca	caagctatcc	atttgaatatg	gggtttaaata	gaaattttgag	240
ggtagaagag	tttcagaaaag	aaggttcagc	ggcacaatca	tgggtgtaggg	agacagcatg	300
tcatctggat	ggactaattc	tgaatggaga	tcctttaaagg	tccaatggga	cgaaccttca	360
tcaatcattt	gg					372

<210> 1456

<211> 436

<212> DNA

<213> Eucalyptus grandis

<400> 1456

gcaacgttagt	gtttccatag	caactcaaac	aacaaaggaa	cttgtttttaa	aggattatgc	60
tctgggagctca	gatgagacaa	gaatatacaa	agcagcgcca	aaaatgggttg	ccagccttgc	120
tgggaagctca	gctcatgtga	catgcaaggga	acctttgcgt	gctlcaaatat	caaatcagct	180
aaaaaaattcg	ctctcagggtt	tgaattctatc	tgttgaaactt	ctagaccagg	ctgttcaact	240
ggctaccaat	gataatcttg	accttggctg	tgcagtcatt	gaacgggctg	cagctgataa	300
ggcaatctcaa	accatcgatg	gtgaaatctc	tcaacaactt	aaactaaaga	taacataggga	360

gggtgttgcg ccagcatttt ttgaagccac tgtatttggg caaggttcaa tgggcattct 420
cccagaggct cttcgc 436

<210> 1457
<211> 352
<212> DNA
<213> *Eucalyptus grandis*

<400> 1457
gcgcggcgga cgggggggga gctggaaatg aagtgcctcg actgctcggc gtcgtcgag 60
gggcgggtgc ccaccgcggc cggcgggcgc tgcataccg agtgcacctc ctgcggcgccg 120
gtcgtggagg agcgcaccca ctccccctcc ctcccccccc aagccctagc cctgcgcgag 180
gccgacgcgc accccttcga gtccaacggc ttcataccg cctctccac ctggtccctc 240
gagcaactccc cgtctccctc ccgctccctc ctctcctct ccggccacct cgccgagctc 300
gagcggaccc tcgagtcac ccaacccctc tctctcctc cctcctcgtc ga 352

<210> 1458
<211> 364
<212> DNA
<213> *Eucalyptus grandis*

<400> 1458
gagaaattta agatcccggt ggagttcaac ggtttgcgg agtttgcccc anatgttact 60
cgtgacatgc ttgatgtcag gccgggggaa gctctcgag tgaactctcc actccagcta 120
caccacacgc cagacgagag gtttgacatc accaatccaa gggatgggct actaaggatg 180
gtgaaatcgc ttctcccgaa agtgatcaca ttgatcgagc aggagtcgaa caccgaacct 240
acaccgttcc tgacaagggt ttgggagacc ctgcactact acttggcaat gtttgagctc 300
attgacgtga cctgccccag agacaggaag gagaggataa acgtggagca gcaactgtttg 360
gcaa 364

<210> 1459
<211> 224
<212> DNA
<213> *Eucalyptus grandis*

<400> 1459
ctcagaagta cttcatcagg caatctaacy tgtcaaaag aaaaacgagc tccagctctgt 60
ttgatattgt ggcagaggaa tcggttgatg tgccaatgg atcaaggagc ttctttgcgg 120
tcgacgagca acagcaggaa acagaagtaa atgatgcctt gcagcagctg ccaactgatg 180
ttgatgaaga atgtgaatct atggaactca ccaactcaaa tact 224

<210> 1460
<211> 363
<212> DNA
<213> *Eucalyptus grandis*

<400> 1460
gggaaaggcc ctcgaaaatg gggttcgggtc ggctgcaggc gagctcagga tccgatggcg 60
acccgaggct cgggtgggtg gccgatgatg aaaggaagag gaagaggatg gagtccaaca 120
gggaatccgc caggcgctcc cggatgagga ggcagaagca gctgggggat ttggtcggag 180
aagtggggca actgcagcag gctaaccgctc agctcgcggt gagtatcaat gctgctcgcc 240
agaagtatgc cgaggtcgag ttggcaaaaca atgtcctcag ggcccaggcc atggagctta 300
ccgagaggct ccggtccctg aactcggtag tcgagatcgt gaggtggatc gtgggctggg 360
gat 363

<210> 1461
<211> 351
<212> DNA
<213> *Eucalyptus grandis*

<400> 1461

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gtttgcccac ccatgggtcca ctccctactt caggagaaaa tatcttaatt tctgagcttg 60
cagagtgtctg caaggaattg gaagaagggc accgtgcttg ggctgcacac aagaaggaag 120
cggcatgggag gtgaaacga ctggagttgc agttggagtc ggagaaggcg tgcaggagga 180
gggagaaaat ggaagagata gaggcgaaaa tcaacactct caggggaagag cagaaaagctt 240
ctttggataa gattgaaaca gaatacagag agcagctggc aggattgagg aaagatgcag 300
aatccaagga gcagaagctg gctgaacagt ggacggcgaa gcatgtcagc t 351

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<210> 1462

<211> 209

<212> DNA

<213> Eucalyptus grandis

<400> 1462

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gttcaatcag ctgcacccga ggatcaacag gaagcccttc agcgaggaaag aggaagagag 60
gctcttgact gcacacaagc tgtgtggcaa taaatgggccc atgatcgctc ggctcttccc 120
cggcgggagc gacaacgcgc taaagaacca ctggcacgtg atcgctcgca ggaagcagag 180
agagcagtc aacaacgcgc gggcgcgga

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<210> 1463

<211> 423

<212> DNA

<213> Eucalyptus grandis

<400> 1463

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ctttgcttt cctctccat ctctctcgct ctctcttttg gattcgtgtg tctttttctt 60
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agagagagcc atcaccaaaa gcccggaagt catggggaga ggaagatcg agatcaagag 180
gatcgagaac acgacgaacc gtccaggtcac ctctctgcaag agaaggaacg gactgttgaa 240
gaagggctac gagctctccg tctctgtgga tgccgaagtg gcctctatcg tcttctccag 300
cagaggagcg ctctacgagt actccaacaa cagcataagg tcaactatag agaggtacaa 360
aaaggctaat tcagatagtt caaacacaa cactgtcaca gagatcaatg cccagttata 420
tca 423

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<210> 1464

<211> 379

<212> DNA

<213> Eucalyptus grandis

<400> 1464

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ctcgatcacg ctcttaagcg catcaggacc aggaagaacc aactcatgca cgagtcgatt 60
tctcagctgc aaaagaagga aaaatctcta caggagcaga ataacgtgct ctctaaaaag 120
atcaagaaaa atgagaaggt aatgagagag agtggacaat gggagcagca aacccccaga 180
ccgaccacat cctccttcat gctacaaccc actttgcctc ttccttccct caccattggc 240
aacacgtttc agacacgcga tgtacttggg ggagcagaac aagagggagag atctcaagcc 300
gcaccagcca acacgctcat gccgccttgg atgatacgcc gttcaaatga atagagagat 360
agagaccac acatttctc

```

<210> 1465

<211> 334

<212> DNA

<213> Eucalyptus grandis

<400> 1465

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catcacacag gttgatttga gaaactgaaat caagatcgct gtcgtcgctg tcggtctcgt 60
cgggtcgtcg cggccgcatt tgactcggcg taacgaacga agccgggttg gatctagggg 120
tgttgggggg cgcggaggaa gctcagagcct cggctgctttg ttttcttttt cttttttgcc 180
gatcatggaa ggcgtcggcg tgcatacctt ggcgatgag cggcagaagg cgcgggttcga 240
cgtggaggag atgaaggtcg tctgggcccgg ctctagccac gccgtcgagg tctccgatcg 300
catggccccc tcgtcgccag cgtatccggc tttc 334

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<210> 1466

<211> 371
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1466
 tctctctctt cgaaaacctt ttctctctct ctctctctcc tctgtgattg cagatcaggc 60
 tctcgcgccca ctccatttcg gcattctcga cctctctctc ccaecggccc actgtcccg 120
 cgcgcgaatt cgccccgcgc tegtaggaga cgcgatcctc cgcgcgcgcg gcgatggcgg 180
 cgctggcccg agctccattc cctacgctag caacgcattt ctttggaaat caggccaggg 240
 gaaggaatca attactccct cgttactggc ccaggataac agatcaagag ctacacacaga 300
 tccctggaga ctcaaatctt gtaatcactc cgtgttttga gaaaatgttg agtgctagt 360
 atgcaggtaa a 371

<210> 1467
 <211> 456
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1467
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 gggtgaacga gaggacctca gagtgcgacc tggcgaaagt atagccgtga attttccctt 120
 gtgttttgcac cacatgccag atgaaagcgt cagtaccgat aatcaccgcg atcggtgtct 180
 cgcgatgggt aagagtctat ccccaaagggt ggtcacctc gtggagcaag agctctaaaa 240
 caacacgtcc ccattctata caaggttcat agagactttg gactattata ccgcaatgtt 300
 tgagtcaatt gatgtagcgt gccgacggga tgacaagcaa aggatcagtg cggagcagca 360
 ttgtgtcgcc agggacatga tcaacatgat agcttgtgag gagacggaaa ggggtgaaa 420
 gcatagaact ttggggaaat ggaggtcaag gtttag 456

<210> 1468
 <211> 417
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1468
 ggaacatcaa tcgaatccat ggcatcagag ctctcagccc gctaatacaca ggcagctcaa 60
 cctagagctc gcacttgagc catgttcacc atcctcgtea tcatcaccag catcactcca 120
 tctcttgcga gttcctgcaa aagacaacaa gcttltactca tgcaacttct gccaaaagaa 180
 gttctatagc gtcgaagcac ttgggggtca ccagaatgct cacaagctcg agcgaaacct 240
 agcgaaagag agcaggagct tbtgtctctgc cgcaaaacct cctgcggcga cctcgaatgg 300
 tcaccatgta cggccatctt ttcaatctgt ggtttatgag aatcagccac gtttggccag 360
 gcatgtgtgg gatgatatga ggtatgtctg gactaatccg ctgtatgggt catctctg 417

<210> 1469
 <211> 460
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1469
 aggatcgaga acaagataaa ccggcaagt acgttcgcga agcggaagaa cgggctgctc 60
 aagaagcgct acgagctctc ggtgctctgc gacgccgagg tcgcgctcat catcttctcc 120
 agcccgccga agctccatga attctgtagc ggcccaaggt atcgctatt tbtatgttat 180
 cacttgtttt tctcgttaat gtlatgatga gacatcaggg ggagaaaccc agaactgaga 240
 tcacactgtt tcaataaatt ctctcgtcca aattctttcg ggaacccctc agatcttgg 300
 gatctggatc ttgggtgctgc cctaaggaga tggcgattta ttgggttttc ttcttttttg 360
 ggtttcagtt tcttactctt ttttgcgac ttctcgttca ccatgaaaaa aagctttcag 420
 ccgacagtt tcttgcctcc tggggtttct gatcttctct 460

<210> 1470
 <211> 408
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1470
 gaggaagccg tcgccgtcga gccgagtcag gaggtcttcg atcgcttctt cgcgcgcttg 60
 ctcggttgat ccccgagggg cggaccggcc gaggcgacgc acggcgcgag cgacaaggag 120
 tccaaattcat ccgacggcgg cggcgccggc ggcggcgcaac gggatgagaa gctgggtcgtc 180
 gggagataacg agctttccga ggcgcgtgat gatgatgatc ccgtctctaa gaaacagaga 240
 aggcagctca ggaataagaa tgcgcggctt aggtcgaggg agaggaagag aagttaactg 300
 aaagagctgg agatgaagag caaatatatg gaaggggaat gccgcagctg ggggcgggtg 360
 ctccagtgct ttgtgctga gaatcaactc tgcgtctgaa ttgggaga 408

<210> 1471
 <211> 530
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1471
 gcagaatctg tagtatatat gacgatgaaa gggaaatcta tcaactgcct tactgtaact 60
 tgtgtcgtgt gggaaaggga ttgggcattg actatttcca ttgcatgaac tgcgaatgcct 120
 gcatgctcgc ctccctttca gttcacaaat gcagacagaa atgcttagaa gataactgtc 180
 ctatttgccg tgaatcaatt ttacatcoga actctccagt aaaggccctc ccctgtggcc 240
 acttgatgca ctccgcatgt ttccaggagt atactgttac tcaactatct tgcctgatt 300
 gtacgaagtc actaggggac atgcagggtt attttaaaat gttggataca cttttggccc 360
 aagagcaaat gccagatgag tattctggca agaccagggt tattctctgc aatgaactgcg 420
 agaagagagg aagcacatct ttctattggt ttatcacaa gtgcccctcat tgcggttcat 480
 ataacacgag gctgctttga ttccaaacta agacgcatat atataactct 530

<210> 1472
 <211> 381
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1472
 ttgccgccca actgaagcac agctgcgagc tactgggtga gaaggacggc gcgggcagct 60
 ccggtataac caagggcgag acaccacggc tcaagtgtct cgaccagagc ctgaggcgagc 120
 agagggcttt ccaccagatg ggcgatgatg agcaagaggc ctggaggccg cagcggggcc 180
 tgccgggagc gtgggtcaac atactgcgtg catgctcttt cgagcatttc ttgcatccgt 240
 atccaagtga cgtcgataag catctgttgg ctgcagacag tgggtctctc agaaaccagg 300
 tctcgaaatt gtccataatt gccagggttc ggttggtgaa acccatgggt gaggagatgt 360
 accagcaaga gtccaaagaa g 381

<210> 1473
 <211> 567
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1473
 caccggcaaca aatggaagac aagacgctgt tcttctctac tgagggatcc cttctttata 60
 cctggtttta ggtagttctt ccacctctct aagcaggact tggcatcagc gttaaggggga 120
 gtgttcatgc gctgagacac aaggtgccac tcccttgggc catactgttt cacatatgca 180
 cgtaacaagg cgtcctcttc agctctccaa cgctgtcttt ccttcattgc caggtgtaga 240
 caccactctc cattgcctca aacttagatc ttctcatagt tggctacaga agaagatggt 300
 gataatacaa attagaagta attctcaca tcacaatata atacacaga ttttagctga 360
 gtttaactggt ctgagaaaag aaaagaatcc caaggaggag acaggtttat ccaaggaaat 420
 gcccgctctn catgctctc gcggtccata cgggatggcc atcgacgggt gtcatagcgg 480
 aaatgctaac agtttcatgg agaattgccca gagattgaac atgctcgttc catcacgatca 540
 gggccatgat caggagcaga tcaacgc 567

<210> 1474
 <211> 423
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1474
 tccccgtcca ttccacagatc agcggcactt cttgcgcaga caattgcaga ctctctctct 60
 cattcaggcg cctgtctctt caagaatttt gtcaaaagaaa ctccctttgtt ttttctctct 120
 ctctctctct ctctcgacca tggcccgacc gcagcagcga tatcgcgcg tgccccagag 180
 gcattggggg cctctgggtt ccgaaattcg ccacccttta tfgaaaacaa gaatttggct 240
 agggacgttt gaaaacggcg aggatgcggc tcgagcctat gacgaggcgg caaggctaat 300
 gtgccccggc agggctcgga ccaacttccc ttacaaccca aacatgtctc agtctctctc 360
 gtccaagctc ctctcgcgga cattgacagc aaagctccac aggtgctaca tggcctcggt 420
 gca 423

<210> 1475
 <211> 402
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1475
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 aaagcgcaac ctacgatgag acgacagaga agcagcgaat caggagaagg ccgcaccaga 120
 agccgtacag gggatctcgg atgaggaagt ggggtaagt ggtggctgag atcaggggagc 180
 ccaacaagcg ctcccgtatc tggctcggct cctacgccac cgccgtggct gccgcccgc 240
 cctacgcac cgctgtgttc tacctcgggt gccctctgc ccgctcaac tcccccgacc 300
 tcactcttga cgaggggcag gactcgtcgg gtgaggtctc agccgctcc atccgcaggc 360
 gtgcagctga ggtcggggcc caagtttgat gctgtccaa gc 420

<210> 1476
 <211> 269
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1476
 gaggagatgg cgagggggaa gatccagatc aagctgatag agaacacgac gaaccggcag 60
 gtgacctact cgaagcgacg gaacgggctn ttcaagaagg cgaacgagct caccgtctn 120
 tgcgacgccca aggtctccat catcatgac tcacgacccg gcaagctcca cgagtacatc 180
 aagctctccc acctcaacga agaagatgta cgatcagtat cagcaggcgc tcgaggttga 240
 tctctggagc tctcatatg agaagatgc 269

<210> 1477
 <211> 297
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1477
 ggcaaccagt gtgagatgct cctgctgtca cactgtcaac cttgcaccag ttacacctgc 60
 ttccaatcaa tatgctcatg taaattgcgg aaactgtcgg acgatgctga tgtatccatc 120
 tggagctaac tctgtgaagt gtgcgatctg tcaatttatt actaacgttg gtgcgggcaa 180
 tccaaggggt tctgttccac cacaagaagt cgatggacca cgttcaggga caacaccgtc 240
 tacttcaacy tcaatgcccc aatctactca aactgtagtg gttgaaaacc ccattgtc 297

<210> 1478
 <211> 408
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1478
 ggctgtctct acaacttcaa atgcaattat tggcctcaga gacagttagc ttgtcccgca 60
 gctgtgtgaa ctctgccatg ggttcatgta catgtggagg tcaatgaatg aataccatga 120
 attcagaac aacattgtgc agcaagtcgg gggccttctg aaccagacaa acaagggtga 180
 atctactctt gaattgcctc ggcaaggcaac tctgtgacct gaatcagctg tttcttcatg 240
 gcattccagt tctgtccgct taattaagtt ccagtgtgat ttcacccgtt cccttcaagg 300
 ctggttcaaa ctgactctcc ttctgttga caatgataac aatgggacc aggaacactc 360

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tgatgcctat gccttctcgc atgagtggaa gcttgcaacta aacatgtc 408

<210> 1479
<211> 317
<212> DNA
<213> Eucalyptus grandis

<400> 1479
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cagcaactat tggcaatcga tctcatggct tcctcgagcg gaacgtcttc cgggtcaaac 180
ttgatccaga actcgggagc agaggagagt ctgcaggcct tgatggatca gaggaagagg 240
aagaggatga tctccaaccg cgagtcggcg aggcgggtcgc ggaatgaggaa gcagaggcac 300
ctggacgacg tgatgct

<210> 1480
<211> 411
<212> DNA
<213> Eucalyptus grandis

<400> 1480
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gaaacgggtga accccaaaac accctctatt gaggaagaat ctgctaaaac gaaagcttct 120
ggcatcgatc aagaacaggc cgattcgtcg aactcgcagg agaagcccc cctgaagaag 180
ccggacaaga tcataccttg cccgcgatgc aacacgatcg acaccaagt ctgctactac 240
aacaactaca acgtcaatca gccccggcac ttctgcaagg cctgccaaag atactggacg 300
gccggcggta ccatgcggaa cgttcccgtg ggaagctgggc gccgcaagag caagagctca 360
gcttcgcatt atcgccagat cactctctct gangctcttc aagcaagctc g 411

<210> 1481
<211> 401
<212> DNA
<213> Eucalyptus grandis

<400> 1481
gtccgtggag ccatcgaaag tcccagagcc acgggaaaat tggctcgcgc tgtaaaactcg 60
cccagcatgt cctcatcatt ggacctgaag aattcttgca tggatgcaaa tgccaaacct 120
gtgagcattt tgcacactgg ttagtgcoa cctgaagcct gggtacagaa tgaaagagaa 180
ctgaaaaagg agaggaggaa acagtgcac cgtgaatctg ctagaagatc aagactgagg 240
aagcggcgta agactgaaga acttgccaaa aagggtgatt ctctgagtgc cgagaatagg 300
gtctttaaatt ctgaaattag tcaactaac gagaaactcg ataaatttag gctagaaaaa 360
gccacattga tggaaagact ggaaaatgca caggaggtgg a 401

<210> 1482
<211> 438
<212> DNA
<213> Eucalyptus grandis

<400> 1482
gtactcgggg ctacgctgat ggaattgacc gacaggctgc ggtccttgaa ttcagtgttt 60
caggctcgtg aggtggttag cgggctcgcc atcgatatc ccgagatacc tgatccgctt 120
atgaacccat ggcagctgcc ctgcccgatg cagccaatta cggcgtctgc cgacatgttg 180
cagctgtgag catcagattg gaagtgtaaa agttggggct gattcttttg gagtccccct 240
ctggggggat ggtagatcca tagccatttg ctgcttttgt ttctcttgtc aattccgttc 300
tctttcttga agttggaact ccaatatctg tatgcgtctg tctagatgga ctggcgcgtt 360
tatgtctgtg tgacattgta ctggctgttt ctgtctgttt acttatggga tgttccgtgt 420
ctaaaaaaa aaaaaaaa

<210> 1483
<211> 370
<212> DNA

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<213> Eucalyptus grandis

<400> 1483

cagt	cggtt	tgccgtt	taga	tgatagggcc	gagggagctc	gctccccctc	tccggaacct	60
atata	tgata	ataggggg	atagggat	caat	acgagagagt	atcgtgctcg	tgagcgtctg	120
aaca	aggaga	gacaggacat	tattacacag	attattaagc	ggaatccagc	gtttaagccc		180
ccgg	ctgatt	atagggctcc	caagctacag	aagaagctgt	acatccgat	gaaaggtac		240
cccg	gttaca	atattatttg	acttataata	ggacctaggg	gcaataccca	naaaaggtatg		300
gaac	gtgaaa	ctgggtc	gaaa	gatcgctcatt	cgnnggaaaag	gttcagtgaa	agagggtagg	360
ttgc	agcaga							370

<210> 1484

<211> 335

<212> DNA

<213> Eucalyptus grandis

<400> 1484

gagg	aggaga	gcaggaa	gaa	ggcgccggc	ggtagcggcg	agtcaaacca	gggagggaaa	60
ggct	cgaggt	cggatcagga	gagaaggaa	gggattgctt	ggaccgagga	agaacacagg		120
tggg	gtcttc	ttcttgc	caa	tcggttattt	cttctagggc	tagataaata	tgggaaagggc	180
gaatt	ggcgaa	gtatttc	ccc	gaactttgtc	gncacaagga	cgctacgca	agttgcgcagc	240
catg	cacaga	agtattttat	ccgtctgagc	tctgttaaca	aagataggag	gcgatctagc		300
attcat	gata	tcaattaccgt	aggcagtgga	gacct				335

<210> 1485

<211> 371

<212> DNA

<213> Eucalyptus grandis

<400> 1485

gtgg	ttttgc	cgctctccgg	gatggtgaaa	tcgagcggag	gcgcggggga	ttctgatcat		60
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aaaa	ggccgc	gaaagcgagg	taggaaacct	gccaatggcc	gagaggagcc	attgaatcat		180
gttg	aggccg	agaggcgag	gagggagaa	ag	ctlaaccagc	ggttttacgc	gctccgggccc	240
gtgg	tttcta	atgtttccaa	gatggacaaa	gcgtcacttc	ttggcgatgc	gatagcgtagc		300
atca	aggagc	tgaactcgaa	gctccagacc	acggaaactctg	acaaggagaa	tctgcagaa		360
caaat	ggaat	c						371

<210> 1486

<211> 373

<212> DNA

<213> Eucalyptus grandis

<400> 1486

accacc	accca	gtaccaccac	ctccctctct	ctctctctct	ctctctctct	ttttccctct		60
gttcgt	gttc	ggtagcattg	cgaagcggaa	agcgaatgct	cctctccgga	ttgccatgaa		120
ctccaa	cgct	tcctccaaac	cccagtcgat	ggccaacctcc	acgacgtcgg	cgaccactcc		180
ggcg	cgccgc	ggcgacggcg	gcaagaaggt	caggaagccc	tacacgatca	ccaagtccag		240
ggag	agctgg	acggaggagg	agcacgacaa	gttcctcgag	gcccctccagc	tgtttgcacg		300
cgatt	ggaag	aaaattgagg	atttttgtggg	ctcaaaagact	gtcattccaga	tccgaagcca		360
tgcc	cagaaa	tac						373

<210> 1487

<211> 319

<212> DNA

<213> Eucalyptus grandis

<400> 1487

gagat	gtgtag	taaatacag	cctcggagag	cagctcgacg	gatgatgatg	atttgtacaa		60
gaaac	caag	gaagaaacaa	taaaggcgaa	gatcacgag	gtttattata	ggaccgaagg		120
gccagg	cact	agcctattg	tgaagatgg	acaccagtgg	aggaagtatg	gacaaaagat		180

caccaggagac	aacccttgtc	ccagagctta	cttcaaatgc	gctcacgctc	caagctgcct	240
tgtaagaag	aaggtgcaaa	gaagtgcga	agaccaatcg	gtcatagtgtg	cgacttatga	300
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<210> 1488

<211> 384

<212> DNA

<213> Eucalyptus grandis

<400> 1488

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agccaaaatg	ttgccggatt	cattccggga	tggatgcttt	gaacttacta	catcgacttg	180
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gacaataagt	acataatatt	ttggagctgt	gatgacataa	aaagagggaag	gccacccttt	300
cctctctcat	gatcagaact	tttgataatg	tctgtatggc	ccggcagtg	aattggaacg	360
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<210> 1489

<211> 411

<212> DNA

<213> Eucalyptus grandis

<400> 1489

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caaatccggg	ctcgggtgcc	gggacggact	gacaaagaaa	taaaagaactt	ttggaactca	180
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agcgattcct	cctgtgtcat	agacgttaaa	gatgtcatgg	gaggtctcat	ctcccttcag	300
gaacaaggac	tcattgccact	ttatatggac	tcgtgtcgt	ccgtgcaagc	tttggtctct	360
aaccagggtta	tcgatccatt	actaccctca	ctcaacaaaa	ggcctcgacc	t	411

<210> 1490

<211> 396

<212> DNA

<213> Eucalyptus grandis

<400> 1490

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gtgatgctga	gggtgtgtgc	ataatcttct	cgaatactgg	caagctttac	gagttctcca	180
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ctgtgttaga	gtacaagcca	gagttctcga	aagaagatga	taagggtgga	gacaccctaa	300
aagatgaat	cgacagagct	cagatgagac	aactaaggct	actggggcaag	gacttgaatg	360
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<210> 1491

<211> 188

<212> DNA

<213> Eucalyptus grandis

<400> 1491

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catcgaaagt	ttttaattgg	ttcccgaaa	ttgggtgaaag	gagactggcg	agggatagct	120
cgtgactttg	tgactacaag	gactcctact	caagtggcaa	gccatgcccc	gaagtattat	180
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<210> 1492

<211> 461

<212> DNA

<213> Eucalyptus grandis

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<400> 1492
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gacccaattt cctctctccg tcccttcaaa ctccacagtg ggaattattt tggaaacccct 180
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aagaaactga gcacgaagaa tgtgatcacc actcgtatgt tgatgaagat agaggcaaca 360
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tgaggatgaa ggaacagaca cagctgtgaa tctgaggatg a 461

<210> 1493
<211> 445
<212> DNA
<213> Eucalyptus grandis

<400> 1493
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cacccgagaa catgagccaa tccaagggcc caccgtgctc aaagggtggc aggggtccgc 180
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cttctgcctc ggtgatggc tctcaaatg ttgctgcat tttgccaat gggctggaag 360
cacgcttgcc aggcagtgcc ggtgatagac aaacctttt ctattcttcc gaattgcaga 420
agaggacagt agctgataaa gttga 445

<210> 1494
<211> 419
<212> DNA
<213> Eucalyptus grandis

<400> 1494
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gagttgcagg ctaagggtgc tgaattacct gaagccagac ataaagcatg gaggtttcac 120
tgaggaggag gatcacgtca tctgcactct tttctttacc ataggaagca ggtggtcggt 180
aattgcttcc aaattgccag gaaggacaga taatgatgtg aagaactact ggaacccaa 240
gctgaagaa agctaatga agcaactggc ttctctgaaa acagtgcctg aaagtaactt 300
tgctatcatc gttctgcgcac agaaactcgc cctgagacca agaactcgga 360
atatgtcgtc aattcaatgg gattccccaa gcagaacttc aatccaggaa taccacctt 419

<210> 1495
<211> 388
<212> DNA
<213> Eucalyptus grandis

<400> 1495
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acatgaagct agagtatcac aaaaagggtg ctttgcataa caagcagaag aaacgtgggt 180
ctagtggtga atccctggag aaaaacaaaag cagctgtaag tcatttgcat acgacataca 240
tagttgacat cgactccatg gattcaactg cttcagaaat aaaccacata agggacaaca 300
agctgtaccc aaagctgcg caactgtgct atgggatggc gaatatgtgg gaaaaaatgc 360
gcatgcatca tgataagcag gagtctat 388

<210> 1496
<211> 417
<212> DNA
<213> Eucalyptus grandis

<400> 1496
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cgacgacagt	ggttaagtccc	aagatgtcga	ggtgagaaaa	gggcccgtgga	cgatggaaga	120
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caaaagtctc	ggtctaaaac	gtaccgggaa	gagttgtcgg	ctccgggtgc	tgaactatct	240
gcgacccgac	gtccggagag	gcaacatcac	tactgaggag	cagctctctga	tcatggaact	300
gcattgccaa	tggggaaaac	ggtgagatgc	acataagtca	cacaactttt	cgttacatag	360
ggtctacaac	ataataccca	tcgatcatat	tgaacaagg	tcccgtggn	atcacga	417

<210> 1497

<211> 404

<212> DNA

<213> *Eucalyptus grandis*

<400> 1497

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agggtgacca	attacctgag	gccagacttg	aagagaggcc	ttttgtccga	gtatgaagag	180
aaaatgggtca	ttgacctcca	tgcgcaactt	ggcaacagat	ggtcgaaaat	agctctctac	240
ctcccgggaa	gaacagacaa	tgagatcaag	aatcacttga	acatccacat	caagaagaag	300
ctcaagaaga	tggggcattg	tcctctcact	cacaagccat	tagtcaccaa	caacgacaac	360
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<210> 1498

<211> 340

<212> DNA

<213> *Eucalyptus grandis*

<400> 1498

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aaacacaaat	atgatgttcc	cactgcacaa	tctagcagcc	atgacactgc	agctccctcc	180
gctctaagtg	gactgccaa	aacaagatca	gaaggtgaaa	cagtgagcct	agatcttgyt	240
gtgggaagaa	gtgcggcatc	agaaatggcg	tcagctgaga	agcagcagat	ctcccgccca	300
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<210> 1499

<211> 311

<212> DNA

<213> *Eucalyptus grandis*

<400> 1499

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gaggaagacc	agatcctgat	ctcccacatc	caccagtttg	gtcactcaaa	ctggcgtgca	120
cttccctagac	aagcaggtct	gttaagatgt	gggaagagtt	gcagactccg	gtggataaac	180
tacttgccac	cgcagctgaa	gcgagggaa	ttcacccagc	acgaaagaga	caccatcatt	240
gaactctcat	aagttcttgg	caacagatgg	tcggccatag	cctcgagatt	gccggggcga	300
acggacaatg	a					311

<210> 1500

<211> 324

<212> DNA

<213> *Eucalyptus grandis*

<400> 1500

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caatatacag	tctcactctt	gatgaggttc	aaaaccagtt	aggtgattta	gggaagccat	180
tgagcagcat	gaacctggac	gagcttttga	agaatgtctg	gacagctgag	gccggctcag	240
caatgtttat	ggatgttgag	ggcagcgctg	tggttaatca	aaatgctctc	ccccgtcagg	300
gaagcgtttc	attaactggt	gcatt				324

<210> 1501

<211> 380
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1501
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 tttttttatt gagctttttt tttttttttg gtctctgggt ttctgtgtct tgggtcatagc 180
 aagaaaagag agalggggag agggaggggt cagctgaaga ggatcgagaa caagatcagt 240
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 tttcgactga ctcttgcatg

<210> 1502
 <211> 347
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1502
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 gcgcagatga gacgcctcgt caggacgggt cattacagag gagtggagg ggcggccatgg 240
 ggaaaatatg cagcagagat aagagacccc aagaagaacg gcgcgaggat ttggctcggg 300
 acttacgagc tgcctgagga cgcggcattg gcttatgacc ggccgct 347

<210> 1503
 <211> 312
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1503
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 cttggtaata ggnngggcggc catagcttcg taccttcttc agaggactga caatgatac 180
 aagaactact ggaataccca tttgaagaag aagctgaaga agcttcaagg ccaagcaaat 240
 cctgatgatg atgaccataa tcatcaccca caaggggtta acgcaacttc acactccaac 300
 cccaaggggc ag

<210> 1504
 <211> 468
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1504
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 agaaagctacc acttccatgg ccgaatcctc tgatttctgt agttccagtc acaaatggga 180
 agctcttccc atggttctag agaagccccc tgaagatggg tataatgtga ggaagtatgg 240
 ccagaagcag gtcaagggtc ttggttttcc caggagctac tataaatgta gccatctcaa 300
 ttgctcagtc aagaaaaagg ttgagcatct tcttgatggg cgtataacgg aaattactta 360
 cagagggcaa caccagcatg aatatgcctca agccaaaagg acttcaaaag atggtaacaa 420
 cttgaacagg agcaaaatt ctctggctaa atctcaagct gttcttca 468

<210> 1505
 <211> 415
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1505
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atgtttgtta	caagctgaca	gggaacccga	ttccaaagtg	gggtcaatcga	cttgcgacaa	120
atgggtctgc	ctgcgactgc	ttctctctgc	aaacccctaa	gatcaactcga	gtacgtcatg	180
aacctaaactg	ccaaccatgc	gaaagtggaga	agcggagggt	aacaaacaaac	cttcagttgcc	240
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ccctgagagg	ctgtctaccg	ccttgggaac	tcaaaaaggtc	taacaatggc	ctctggaagg	360
aaagatgaga	aaatgccccag	agtgaaacta	catcacaagc	gatcatggag	cgctg	415

<210> 1506

<211> 512

<212> DNA

<213> *Eucalyptus grandis*

<400> 1506

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ctagagagat	atcagaagtg	caactatgga	gccctggagc	cgaactgtgc	cgcgagagaa	120
ctcttgaggt	taagctgtca	gcaggaaat	ttgagactta	aggcagctta	cgaagcccta	180
cagcgaactc	aaaggtattg	aagtttctat	tgtcctttta	attaaatgtc	agcatttcgc	240
ggatgtagt	atcttctac	atgattgggg	tctatctgtg	tcatcgngaa	ctaggaaatc	300
tctggggaaa	gaacttgccc	agttaagcag	caaaagaactc	gagtccttgg	aaagacagct	360
agatgggtca	ttgaagcaga	tcagatcacg	aagagtatgt	aaattatatt	cacgaattct	420
atctaagtc	catctcgagt	tattgnga	acaagttact	gnngtcaatc	gctgggatta	480
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<210> 1507

<211> 342

<212> DNA

<213> *Eucalyptus grandis*

<400> 1507

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gaggaaagct	gtacgaggtc	tgacgcagct	caaagctatg	caaaaaccttg	gaagggtatc	180
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taagcagtc	gcaggaaat	ctgaaactta	agggcagcta	tgaagcccta	cagcgaacgc	300
aaaggaatct	tcttggggaa	gaattagggc	ctctgagcag	ca		342

<210> 1508

<211> 413

<212> DNA

<213> *Eucalyptus grandis*

<400> 1508

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tgccccacac	ggttgatata	aacttcttgg	ttggatctgg	ccagatgtct	caggagacgg	120
agacattgat	ggagattatc	tcaggagggg	acctaaaagg	gattctctgt	gcttgtgcta	180
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tagcaagat	ggcaagttcg	ggaagctcta	tttacaagc	tttaaagtcg	aaagagccctg	360
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<210> 1509

<211> 296

<212> DNA

<213> *Eucalyptus grandis*

<400> 1509

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gaaaggaaac	ccgtatccca	gctactatag	atgcaccagt	gtcaagtgcga	atgtgcggaa	180
gcacgtcgaa	agagcttcag	aagatccgag	agcctttata	acaaatagc	agggaaaaca	240
taaccatgag	atgccactaa	gaagtaccac	acagcaggct	caagatccga	ctcgca	296

<210> 1510
 <211> 441
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1510
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 gacgttttag gctgccaaag aatgtgccc aggtctatct cgggctatct cccagcctga 420
 aaggatttgc cgtcaaatg c 441

<210> 1511
 <211> 315
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1511
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 tcagagccct tgcaccacag ataaagcaaga tggataaggc ttcgatagtg aaagatgcta 240
 ttgattacat ccaagacttg cgtgaacaag aaggnaagat ccgagccgag atcgagagcg 300
 tcgaatctgt aattc 315

<210> 1512
 <211> 409
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1512
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 cagatatttg gccacgattt gaacgagctg agctacgcag aactgcacag tctccgagca 360
 gacgatccga gtctctgtc aattcaagtgc cgggaaagaa agtaccatg 409

<210> 1513
 <211> 323
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1513
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 ggggtacott gatgatttgc tgggtgacaa agatgggtcaa tggatgctcc aaggatggaa 180
 aggtcggatt ctattatgct cctcctgttg ggaacctgtg tagaatttct ccaagtcttt 240
 atatgcttgg ccttttgggt tgagccgggg atagtttatg acgaccaagg aggaagctgt 300
 tggctgattc ttggcaagta agg 323

<210> 1514
 <211> 285
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1514
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 ctctgtttga gaaaatgttg agtgctagtg atgcaggtaa aattggacgt ttagtgtctgc 180
 caagaaaatg tgccgaggcc tatttttcgt ctatttctca gcttgaagga ttgccaactca 240
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<210> 1515
 <211> 290
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1515
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 ccagagagag aaaaagagcac gcaacatttg gtccaaaagt aaaagggtgt tgattgacag 180
 tcaagatgct cttgagctga aaatgacatg ggaagaactc caggatttgc ttccggccacc 240
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<210> 1516
 <211> 357
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1516
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 aaagttaagg gctgttgatt gacagtcagg atgctcttga gctgaaaatg acatggggaag 180
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<210> 1517
 <211> 416
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1517
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 acgggtcaca taacacgaat ctagggttct tgatcttttg tgggtgtctt tcgaatttga 180
 aggaagaaaa gccaaagaaac aagaaaaatg gtgtggagac caccctcgga tcgggctcgg 240
 aatgcgagac gcgtgtgatg ctgaaagctc acgatctcac gcccaataac aattacaccc 300
 gctgggtcgg ctctgggcata ttccattcgg gcattgaaat tcatggcaaa gagtatgggt 360
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<210> 1518
 <211> 218
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1518
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 gcagagggac tgggggaaat ggggtggctga gatcagactt cccaagaaca ggacacgcct 180
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<210> 1519
 <211> 337
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1519
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 cttgcatata atctatgcag ttacaagctg gagacactgt aacttttagc cgcattggacc 180
 ctgaagcgaa acttataaat ggtttccgga aagcatcaac ctctatgatg caggacagcc 240
 aactagctgc tgtttctaac ggttaaccatt caagtgaagg tttgatttct ggtgggtttg 300
 aaaatgtacc tatgataagt gggatttcga gtctcct 337

<210> 1520

<211> 439

<212> DNA

<213> *Eucalyptus grandis*

<400> 1520
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 cggagagaga gagatggcgg agagagagga gaaggggaag tacgacgaga tgatgatgaa 180
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 tcaccaatac ctgcgcggca acttcgctcc cgtgcgcgac gagaccctc ccgtcacoga 360
 cctcccgctc gtcggccatc tccctgattg cttgaatgga gaattcgtcc ggggtggccc 420
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<210> 1521

<211> 448

<212> DNA

<213> *Eucalyptus grandis*

<400> 1521
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 gttggccctc cgcattctgt caactcgcca cctctcgca taagtgcggg tctgcatttg 180
 aacaggccac gttttcgaa gttttccact cgaaggactc tggatggagg gaggtagctt 240
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 attgtggcga gatcaactgc gcgacctgtg cgaagaagtc aggaactctg cactatcgaa 360
 gtgatgagag gctatgtgag ttgtgcatga ttaagtgttc tactggtgaa ctgcaactca 420
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<210> 1522

<211> 439

<212> DNA

<213> *Eucalyptus grandis*

<400> 1522
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 cccagcgagc acgtctctcc atgaacttct ccgacaagga agtgcagctc cgcgtccgacc 180
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 ggggtcgctc gcgcgactcg ggcaagtggg tctgcgaggt tctcgagccc aaaaaaagt 300
 cgaggatctg gctcggcacc ttccctactg tggagatggc agcgaggggc catgagctgg 360
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<210> 1523

<211> 361

<212> DNA

<213> *Eucalyptus grandis*

<400> 1523
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gattgtctgca gattacatat gcccatcaac tgttgatccg tcaaaaggctc cagggtgttc 240
cctagtatct tgagaagttc agatgaacgg aaaccgcca accacatgaa acacctctcg 300
gcggggcgct tccacatgcc agagagtatg tggaaacacat cggccttcgc acctatgttc 360
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<210> 1524

<211> 422

<212> DNA

<213> *Eucalyptus grandis*

<400> 1524

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ggagggtcgaa gccctggccg tggcccaactg cttgatgtct ctcctcccgag tcggcgagtg 180
cgccgactcg aaaccgcgaat cggcggtctac agagcggatg ttccggtgca agacgtgcaa 240
ccgcgagttc tctctattcc agggcgctcgg agggcataga accagccaca agaagcgaaa 300
gctgatcccc ggcggcctct tccacctcgg ctgcaccgcg gattcctcgc cagccaagcc 360
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tc

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<210> 1525

<211> 443

<212> DNA

<213> *Eucalyptus grandis*

<400> 1525

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gtcagaccga gccccgggca agcttgcctc ggaggaccgt tctactgacg agggcgcgct 180
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ttctatggta tcccccaata tggaggcctt atccattttg gtcacgaacg gcaccagtga 360
cctcagatata atgaacctct cgttgagcct ctgcggcgcg cggcgctccg ccaggacatg 420
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<210> 1526

<211> 379

<212> DNA

<213> *Eucalyptus grandis*

<400> 1526

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cgccaccgcc gctgcggcca acacacacac ctgcgtctcc catgacattg cctttaggac 180
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cagtgccagc gtggccagtt ttctctacagt ttgtgcatcg cttctcattc gtacagtcag 300
ctgcaatgtg cccctgtctg tagcagttgt tgcatagcct caagtccaca ggaggagcgc 360
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<210> 1527

<211> 419

<212> DNA

<213> *Eucalyptus grandis*

<400> 1527

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tccggcgccg ggtgcgcttg gtgggtgtga tctctctcgg tcggggcccg caggttcagg 180
tccaaggaga ggatgttgcg ggactttctg gtgggtgatg ccgcagcagc cggcggggtg 240

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gtggggctcg	tcgcgtcgcc	gctgggtggcc	gtcggcgggcg	ggcgcgaccc	gtgcgcctcc	300
atgtggccgc	ccaaggcctg	acccgacgcg	aactcggaac	cacatattgt	gcactcgtgg	360
atcttgggct	tgcctcgctg	atggagcccc	ttgtggctgg	ccacgtgggc	ggagagggg	419

<210> 1528

<211> 361

<212> DNA

<213> *Eucalyptus grandis*

<400> 1528

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acaactcggt	ctcaacatcc	atagactccg	cgcgatttcc	ttcacgaggg	ggttcgtctg	180
agaccggggt	caatcctttg	ccgcattcaa	tctcttgaag	tagctttctc	ttttcttcca	240
gtagttttccg	ctcctctgct	tttagccgtg	caatatgtcc	cctaattaaa	tggttctttc	300
ctgcccctgat	cttgggtaga	cttctttcca	actggttttc	tgtttggttg	agctcctcga	360
ccgaacagga	atccagacc	t				381

<210> 1529

<211> 524

<212> DNA

<213> *Eucalyptus grandis*

<400> 1529

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agggcgaaat	ccggaccttc	ttcttcttgc	tcccttttct	tccgtcagct	cgaatcgtat	180
cgtttctgtc	ctgcgtccat	ccgatcgaca	tgcccgcaat	cttccagctc	gacggcgacc	240
gcgctgcgca	cgccctcccc	gattcgccgg	ttgtcgatca	ggagaaaaat	ccgatcgcca	300
cgagccatga	ttatgctaata	catggggggg	tttgtgcgat	atgcttggag	aaagattgtgc	360
tccaaagaaa	tgccctcgta	aaaggttgcg	agcacgccta	ctgtgtgata	ttgattctctc	420
gctgggcctc	atgtaaggag	agaccaacct	gccctcagtg	taaacatcct	ttcgactctc	480
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<210> 1530

<211> 185

<212> DNA

<213> *Eucalyptus grandis*

<400> 1530

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gaggtccaga	tgtagtccca	acagatnggc	tgtcaatact	agcacagggg	atttccaccag	120
acatcggctg	cccatctggt	agaagagggg	ttggatgtcg	agattcatgt	ctagaagaag	180
aagaa						185

<210> 1531

<211> 385

<212> DNA

<213> *Eucalyptus grandis*

<400> 1531

tcagctagcc	gtcccaaccg	cttcttcacc	cggcagttgt	cctgcgtgca	gcggtagtag	60
cttctgggat	gttgagtggt	cttgaccacc	ttctgaccgt	acttctctca	tttgtaccaca	120
tcgtccagga	catccacatc	gctcatgggt	ttgaagcaaa	acctcggctc	cctcaccttc	180
ctctctccct	ttatcttctt	catcttcaag	gctgaaaccc	ccatgctctg	gtggtgggtg	240
tgatcacgat	aatgatcgcc	atgatctcca	cgcgggatg	aggatctcat	gaccaagctg	300
ctctggtcac	tcaactcacc	ccatgcccag	agattcgggg	ttgatctttg	caaagacaga	360
agctgggggc	ctcccaagag	ttcag				385

<210> 1532

<211> 153

<212> DNA

<213> *Eucalyptus grandis*

<400> 1532

tcgggggtcaa	tccatctgggt	gcagaaacata	aacgcctgct	ttgggtcccg	gcattttctg	60
cacaggtcca	cctaggagga	agaagaacat	ctactggtaa	ccttctccat	ttaccacagc	120
tatcacattg	aaccattgc	tcttgttccc	ccc			153

<210> 1533

<211> 417

<212> DNA

<213> *Eucalyptus grandis*

<400> 1533

cagaaagtga	ctcgccctag	tgtaggagta	gggagaggct	tggatgcaca	ttccattctg	60
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aaactgggtga	taataaaaaa	aagccctgtt	tagctataaa	gggaagcccc	atcctttctc	180
ctccctttct	ctttcttacc	tgtccccccc	tccctctcc	tggctctcgc	tctctctctc	240
tctctcagtt	ctttctcgga	cgggtgtctg	tgcgtggctt	ttgatcggtc	atcacctgag	300
gccgcgtctg	caagcaagt	aagaaggagg	acaaggata	tggcgagaga	gaagatcaag	360
atcaagaaga	tagacaagt	gacggcgagg	caggtgacgt	ttctaagaag	gagacga	417

<210> 1534

<211> 574

<212> DNA

<213> *Eucalyptus grandis*

<400> 1534

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aggcctagaa	gaaataaact	gtgttcttcc	tcgggtccaa	caatccctct	cctctctccc	120
tgatccgac	ctgagccttt	ccctccctgg	tttgactcgc	cgcctaccgc	gcgcctcttc	180
ttctctgtct	cctcctcccc	taagtctact	ggggagccat	cggagcaagc	cgaactgtag	240
gacggcagag	gcacgcggcc	agcctctatc	ctattgacat	cttccaccag	gtcctcgtag	300
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tccggggaaa	cctcgaaagt	ggttagccagg	gcattctcga	acgccttgct	ctgttcccta	420
ctccacgagg	aacaaactagg	gtcactgtct	tcactcgacg	tcactcaaac	aaaaccacaa	480
acccttccca	actccgaagc	acttcacgcy	actcagcagc	gcgacccaat	gaaactcgac	540
ggcacaatct	acggagctat	cgaaccaacc	ccaa			574

<210> 1535

<211> 497

<212> DNA

<213> *Eucalyptus grandis*

<400> 1535

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gggagaccga	tctctccgcc	cgcggggcgt	ggcccccagct	tcattccctg	cgtatagcaac	120
gcatttcaat	gggaagtatgc	tcaatgatgc	taactctact	ggtgaaagtc	acacacgtta	180
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gataaacagat	caagagctac	aacaaatctc	aggagactcg	aactctgtaa	tcaactctct	300
gttttgagaaa	atgttgagtg	ctagttagtc	aggtaaaaa	ggagcttttag	tgtctgccaag	360
aaaaatgtgc	gaggcctatt	ttcgtcttat	ttctcagctt	gaaggattgc	cactcaaaat	420
tcangatgcc	aaaggctctgg	agtggatatt	caatttctgat	tctggccaat	aataatagta	480
gaatgtatgt	tctggaaa					497

<210> 1536

<211> 454

<212> DNA

<213> *Eucalyptus grandis*

<400> 1536

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gagagggcg	acaggcgcg	attttcgggc	tcaacacccat	ggctctgcgtc	cccggtgatcg	180
gcgggggtcgt	cgaattgggc	tccacggagc	cgatctacca	tagccacagat	ctgctgaaca	240
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acgatcagg	cgagagcgat	cctttcttcg	ctctggctca	atgatccggc	gggacgggtc	360
gaggtcacaag	acagcgccgt	cgccggcgcg	ccgcgctcaa	gggtttcttcg	aattataacg	420
gtagcaatca	tgggtctaaa	tcgattcaac	tcga			454

<210> 1537

<211> 266

<212> DNA

<213> Pinus radiata

<400> 1537

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aagcaatgca	ccaaatctgc	agccacagg	aaggggcgga	tcaagaggat	tcgtaggcaa	120
caggaggctg	ccccttcgcc	gccagaggag	gcaactttga	atcagcaaac	tccaaccgtac	180
agaggcgctg	gtcgctcgaa	ctgggggaaa	tgggtgtccg	aaatttcgaga	accgaaaaag	240
aaaacccgaa	tctggtccg	ctcctt				266

<210> 1538

<211> 426

<212> DNA

<213> Pinus radiata

<400> 1538

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aggtagccag	tgggtaacat	taattcaagc	atttgacga	agacaaaggtg	gttcgctcca	180
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tggtttgtct	gtttttgggt	ctgacgttca	tgctgagatg	cttaagattc	ggcctgggga	360
agctttgggt	gtaaattttc	ctttgcagct	cctatcatatg	cctgatgaga	gtgtgaatac	420
aagtaa						426

<210> 1539

<211> 447

<212> DNA

<213> Pinus radiata

<400> 1539

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gcggcgaaag	aaatcacaaa	aaacccatag	caagaaagcc	caagacggct	ctcagccacg	120
aaggtgcagc	cattgtcttg	tacagaagac	tcctcagtg	agagccggac	ccttgggacc	180
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tcctcgaaat	agatcgccaa	aaagaagaag	aacaacagag	gccagagctc	acgtcccaga	360
cgtgttcaag	cgcgccgaac	gagtcatttt	cagacaattc	tttaccgtct	gaagagtcct	420
ttctagttaa	accacaggc	gtgaaat				447

<210> 1540

<211> 382

<212> DNA

<213> Pinus radiata

<400> 1540

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gtccaaggcc	aagttcaatt	ttcccacctc	tcgcgcgaaa	ttttctgcgc	cttcatttct	180
atcacccgag	caaattcaaa	ccgoggggcg	caagttcgcc	gcagaagaat	tcggcttctc	240

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cgaacagatt	acttggaagc	agggtgcgac	atttggggat	tcagtagcat	ttgaaagtal	360
ggagattggc	ggatctttca	ac				382

<210> 1541
 <211> 368
 <212> DNA
 <213> Pinus radiata

<400> 1541						
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tcaggtctgt	ttgacatgac	gcgggtgagt	ttttctctcc	tgtcttaaat	tcttgggtgtg	180
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atcaatcatg	attcataatt	gttctgaaaa	ttatgctaag	aactaatctc	atctttcaaa	300
cctcaaatgg	tattcttttg	tttgaagtgg	nttctaagtt	tccttaattg	ctattcataa	360
tttcattt						382

<210> 1542
 <211> 370
 <212> DNA
 <213> Pinus radiata

<400> 1542						
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atatcatatga	cctcgagatc	agacaaggcc	ttcagtgccc	cagcttcata	caatcgctag	180
cccacaggcc	tgaggagcct	cgaagctgc	tcaagatcac	agcgatagga	caagacgaga	240
acagggtcaa	acagacagg	aggcggttgc	ttgagtttgc	agaatcaatg	gagattgcat	300
ttgcttttca	cccggttggt	gtggacttgg	agaacctgga	tgaatcgccc	ctcaataataa	360
aagccacga						370

<210> 1543
 <211> 404
 <212> DNA
 <213> Pinus radiata

<400> 1543						
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cgcaacagga	tccgacacta	ctactgtcaa	caacggatcc	gctaattggcc	caataggaa	180
tgctccccc	agaattaaat	cgatacaaaa	taataatcca	ggagctgtca	ggcctggctg	240
gggaacatg	cccccttaca	tgaatcctta	tcattcccc	tcaatgcctc	ttccgcccc	300
caatggatcg	cagggtcagc	ttgtgtgcag	tggaatgtga	actcttcttg	tttatccgca	360
agggtgacca	aatgtttgct	gtgcagtatg	caacacagtc	actc		404

<210> 1544
 <211> 339
 <212> DNA
 <213> Pinus radiata

<400> 1544						
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aggatagtct	tctgggaaga	tatatccaaa	ctcatgggtga	aggcaattgg	agggtctctgc	180
ccaagaaagc	agggtcgcga	agatgtggaa	agagctgcag	attgcgttgg	ctaaactatc	240
ttcgcccatg	tatcaagcgg	ggaatatta	caacagatga	agaagaacct	attatcagaa	300
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<210> 1545
 <211> 395

<212> DNA
<213> *Pinus radiata*

<400> 1545
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atatgattct ctccgaatac gttcgaattc atggcgatgg tggatggaga aatcttccgg 180
aaaaagcagg tcttaagaga tgtggaaaga gtctgcagact acgctgggtg aactatcttc 240
gtcccagat taaacgcgga aacatttgcc ccgcccaggga ggagcttatt attcgggtgc 300
atcgccctct tggcaatcgg tggctactga tagcaggagc actgcctggt cgaacagaca 360
acgaaatcaa gaactactgg aacactcatc tgagc 395

<210> 1546
<211> 390
<212> DNA
<213> *Pinus radiata*

<400> 1546
gttctgtcaa gaccagcaa gaattttgtt cggggtttga aggtgggaga agtgagggtga 60
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atgtttacag aggtatcaga cagcgtccat ggggaaaatg ggctcggag attcagagatc 180
ccagtaaggg ggttaggggt tggcttgaa cggtcaaac ggccagaggag gccgccaaagg 240
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actcgtgttc tgttaaaaat gacactagca agaaattgtc agggaaaagaa agggaaagttg 360
tgctcaaaac accctgcttt tgttggtaga 390

<210> 1547
<211> 447
<212> DNA
<213> *Pinus radiata*

<400> 1547
agggtccccc cgaatgact gaagaggagc gggagacgaa gaaggccgcc agtggtggccg 60
ccacggctgc cgaccaggag ctacggaaga aagtgtctgc ggatctgcac gcgctgatta 120
atcccaacgc gactggagag gcggatccgg cggagtctcc aggggatgat gctactgtatg 180
atgggggaagt cagggacgac gagtgggttt acttggtgtc catgatgaag tcatttggaa 240
atggcttggg ggtgccggga caggcatctt cgggtggcat gcctatttgg atcattgggt 300
cagaaaagct tcagagctac aactgtgagc gggctgcgtca ggctcagcaa ttcggcatctc 360
aaaccatggt atgtattcca acactaatg gagtgtgtga gttgggtctc acggatttaa 420
atccgcagaa ctgggatttg atacaga 447

<210> 1548
<211> 357
<212> DNA
<213> *Pinus radiata*

<400> 1548
cagaaaatctt gtgactcctt tgattataat caaaggctcag ccttgcaagc aacctggaag 60
ctgtgttcag ttcagagctt ctcttgcgcc atggattcgg agcttatgat gtagtccatg 120
cggaaccttt cgaataatgg attcgtact tcttccatgg aaatgttagc ggttatgccc 180
gtagcagata ctgtcgaagc accaccgcat tctgcagcgt tgttcgccc accacgcaat 240
ggccgatttg cagggagcgc gcgggcaagg ccgcatccga gtcaagtgtc caaatgcctt 300
cgctgcgatt cgctaaacac aaagtctctc tactacaaca actacaatct ctgcgag 357

<210> 1549
<211> 395
<212> DNA
<213> *Pinus radiata*

<400> 1549
gagcactcaa aatgggggaag acgaagatgg agattaaac cattcaaaac cctagccggc 60

gccaggttac	ttctctcgaaa	cgcaagaacg	gattgtctaaa	aaaggcattc	gagctttctg	120
ttctctcgca	tgctgaagtc	gccctgatca	ttttctcgga	aactggcaag	atctgcgagt	180
ttgcaagcga	cgacgacatc	gcacaaatc	tggaataata	tcgaattatc	acggaaacag	240
atggaacat	ggagtcgtcg	tcggtccaaa	cggtgaaggt	ttgactagaa	tgagaatttg	300
aagttttaac	cctgcaaatc	ttatattgaa	gggaaatcat	ggtccaaat	caagtcgcc	360
cccaagttaa	agtccaatgt	aatcacttta	gcttg			395

<210> 1550
 <211> 634
 <212> DNA
 <213> Pinus radiata

<400> 1550						
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agatttcaca	gtgacccttg	aatacaggta	agcgttaagg	tgaattttga	caatggagga	120
tcacggaggg	gacgacgcat	tcagagtgtat	gtagttagga	gacgcacatt	tcgtcgcagc	180
gagccttata	gactataccc	taatgatagg	aatggatatg	gtcccaggtc	tccaggcct	240
attgagcttt	gtaacaactg	caagcgcaaca	gggcaactatg	cacgagagtg	tccaatgtct	300
tcgtgatgca	acaactgttg	agtttcaggg	cacattgcat	cgaagtgtcc	aaaagagcaa	360
ttatgcagga	attgcaagaa	gcctgtgtcat	cttgacgctg	atgcccgcga	tgagcctgtc	420
tgtaaacatg	gtgtgtaaaa	aggtcacatg	gcaaaaggaat	gttctgtcca	tgagctaggga	480
cttccaaaa	cagcactctg	caagaagtgc	tatttgcctg	ggcatattat	ggcagactgt	540
cctaagtata	aggcctgcga	taattgtcgc	cagactggcc	acttggctcg	agattgtatg	600
aatagccggg	tttgcaatgg	ctgtggtgaa	cctg			634

<210> 1551
 <211> 612
 <212> DNA
 <213> Pinus radiata

<400> 1551						
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cagctacagg	aatgtcgaa	tctgggttct	tggctgactt	gtctaaggac	aaaattcgag	180
acaacaggga	gaagaagaag	cagaacccaa	ccgatgaagc	gataatccct	gaataaccgc	240
ctataaagga	gactccaggg	tcacagaggg	cggtgcccgg	gcgggctcgc	agcaagcgcc	300
gcagaagctc	aggagcccca	attcgcgggt	ggtctacttc	tgaagattac	gcattgcaga	360
atgagggcgg	gtgaaaaag	gtaacaggag	cggacgctat	aaatcattac	cagtcctcgg	420
cgccccagca	gcagccaaag	cgctgcactc	attgtctcag	ccagcgaacc	ccgcagtgcc	480
gattggggcc	gttgggtccc	aagaccctgt	gcaatgcctg	cggtgtgagg	ttcaagtctg	540
gcaggctctt	ccccgaatc	aggcctgcca	agagccccc	tttcattcga	tacattcatt	600
caaatcccca	ta					612

<210> 1552
 <211> 562
 <212> DNA
 <213> Pinus radiata

<400> 1552						
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atgcttgaag	gctatgccta	tgcttcgga	aacataccgt	gacagctttg	agacgacttc	120
gggaggtagc	agcgtggatc	tggttagaat	ggctctacca	ggtttggccc	ctaatttgtc	180
ttctgcttca	gtttcagctt	cagcgtcgga	agattctgcc	aagaaaataa	ggaaacccca	240
taccatcacc	aagtcagag	agagctggtc	tgagcaagag	cacgataaat	ttctcgaagc	300
ccttcaca	tttgatcgtg	attggaaaaa	gattgaagct	ttttaggat	caagagactg	360
catacagat	cgagtcag	cacaaaagta	cttcttgaag	gtccaaaaga	atggcacaag	420
agaacatgta	ccactctctc	gtccaaaacg	caaagcatct	catccatacc	cacgaaggcg	480
ctcaaaaaa	gttctctgtg	cacagcaagt	atcaactgct	tttccaaact	ctgctactca	540
actagattct	ggatattatc	ca				562

<210> 1553

<211> 392
 <212> DNA
 <213> Pinus radiata

<400> 1553
 caacaatgtt ccatatttgag acctactttt gtccgcattg cctccactcc agaacgttgt 60
 attttcttta atgcatttgc cctcaatatac ttctcttttg attgcacagt cgccaaaccc 120
 atgtctctat accttgagac taatgcacga gaaagagcaa catctctctc aacogttggg 180
 cgtggctctc gacggttaata acgaagaaat tcacgagaaac caagcatctt gcatgttgtt 240
 ccattttcag actttctttg gattaccagt tcagcccttc caaagccaaag ttcaatatgt 300
 acattgagat tttctctgtt gggcactatt tgcacccac tttcatccgt gtaactgtgt 360
 cgtgagtcac aaaagtcggc taaatcacta tc 392

<210> 1554
 <211> 570
 <212> DNA
 <213> Pinus radiata

<400> 1554
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 caccocatga gaaaaaccta cagaggagtt cggcgagggc aatggggcaa atgggtagcc 120
 gagatttcgc tccctcagaa tcgaaccggg ctctggctcg gcaccttttg cacccgagaa 180
 gcagcagctc tagcatatga ccgagctgtt tacagatggc ggggtgagtg cgtctggctt 240
 aattttcccc atttgttttc aaaaaagtat cagaattctt ctcccagctc caccaatggc 300
 aggatctctc gctttctctg tgaaaaaatc gatcagaaat atgcataata tggtagccca 360
 gttcatatga atgtatatat ggggtccccc attcgggataa ctgcatacaa cggcgaccca 420
 gttctctatg atgtatatat gaggtaacca gttcgggttaa gtgcataata tggtagccca 480
 gttcggataa gtgcttatag tgggtgatcc cgtggcaata ccgttacttt agcggaaatcc 540
 gagcttgaaa gctctcgcag ccatgaatcc 570

<210> 1555
 <211> 392
 <212> DNA
 <213> Pinus radiata

<400> 1555
 cttagcgagc gttcccaatc cctagtcctt gcaactttact cgtctctctg tgaagatgag 60
 gagatttcgc gttgagaagg gtaatacaaa caaagggggc tggacccaac aagaagatgc 120
 ccgactctat gcctacattc gagccccagg cgaaggcggt tggcatttcc tccccagggc 180
 cgcaggtctg ctgcgatgtg ggaagagttg caggctcgga tggataaatt acctgcgtcc 240
 taatctgaag cgtggaaact tctctgaaga agaggacgat ctcataatca aactccacaa 300
 cctctgggc gataagtggt ctcttatcgc gggctcagtt cggggccgga tggaaagacca 360
 gataaagaac tattgggata cccactttta ga 392

<210> 1556
 <211> 364
 <212> DNA
 <213> Pinus radiata

<400> 1556
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 agttacacac caagaaaatc cacaatgggt agatctcctt gctgcgcaaa ggaagggtcc 120
 aacccggggg cctggagcaa aacggagagt attattctct ccgaatacat tcgaattcat 180
 ggccgaggtg ggtggagaag tctccccaaa aaagcagggc ttaagcgggt tggaaagagt 240
 tgtagattac gttgggttaa ctattctcgt ccgcacatta aacgcggaga catttcccca 300
 gctgaggagg agctgattat tcggctgcac cgccttcttg gtaatcgggt gtcgctgata 360
 gcag 364

<210> 1557
 <211> 355
 <212> DNA

<213> *Pinus radiata*

<400> 1557

ggagcacc	aaatgggg	gacgaagatg	gagatgaaac	acattcaaaa	ccctagccgc	60
cgccaaagt	ctttctcgaa	acgcaagaac	ggattgctaa	aaaaggcatt	cgagctttct	120
gttctctgcg	atgctgaagt	cgcctctatc	attttctcgg	aaactgggca	gatcagcgag	180
tttgcaagcc	acaacgacat	ggcaacaata	ctggaaaaat	atcgcatata	cacgcaaaaa	240
gaaacagatg	gaaacatggg	ggcttcgtcg	gtccaaaagc	tgaagggttg	tgaatcacaa	300
ttgaaagcgt	tgacgagag	gatggacaat	ttgaaaaaaa	aggaacgaaa	catgg	355

<210> 1558

<211> 478

<212> DNA

<213> *Pinus radiata*

<400> 1558

aaaaagctgt	aaaacgggtat	atatagagcg	ctctccagtc	taacatcttg	gattgattgt	60
ttttctgttag	aaattcccat	catccctctg	tgtcttctct	cttttgaaatc	cagagactgt	120
ttttatgggtg	gctglaaatg	ctgaaataat	gcccaaatc	gaagggaagt	ctgcgaaatc	180
cctggattca	acattcaaac	tggttcggcag	aacgattgct	gtgaaaaatc	cctgtgatag	240
cagcagcaat	ggatctcatg	tcgatgggat	tccagctgaa	gcagtgaaat	cagcagctcc	300
caaggcttct	gaaacgcctc	atcatgatga	gaaacagaa	cagaatgagg	attcagaaaa	360
ggtagggtaa	aagcccaaaa	agcttctgcc	ctgcctctgc	tgcgagagca	tggaaccaca	420
attttgctat	ttcaataaet	ataatgtcaa	ccagcctcgg	cattattgca	ggagatgc	478

<210> 1559

<211> 389

<212> DNA

<213> *Pinus radiata*

<400> 1559

agaagggttg	aatggcttag	tccgctcatt	tgatggcgaa	cagatctttg	tggggaggtt	60
cagactttga	ttatgagaac	gaagccgata	cgaggaaagg	tccatggact	gtggaaagag	120
acatgcagct	tggtatttga	aatttgcacg	gagaaaggag	ctggaacttt	ctgcgcagag	180
catctggcct	ccagagaact	ggtaagagct	gccggctaag	gtgggtttaa	tatctccggc	240
ctgatctcaa	gcggagcaag	atcaactcctg	aagaagaacg	tttgaltatt	gaactccatc	300
gccgtttggg	aaatagtggt	tctcgtattg	cacaaagtgt	accgggaagg	acggacaattg	360
aaatcaagaa	tttctggaga	actcgtatg				389

<210> 1560

<211> 354

<212> DNA

<213> *Pinus radiata*

<400> 1560

agatgcctcg	ggtagcagtt	tacaagagcc	tgaggagaat	gatgaagaac	ttgctcaagc	60
tcttgaagca	agtttgaaaa	tgggttcaca	gcaaaatcct	ccagctcagc	ctccatcata	120
ctcttaccct	agagagataca	ggatctgtgc	tggttgcaat	catgagatag	gctatggggc	180
gttttttaagt	tgatagggga	ccttatggca	tccagattgt	ttttgttgtg	ttgcatgtag	240
tctaccata	cgtgaacacg	agttttccat	gtcagggaat	gatccatacc	acaaatcctg	300
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<210> 1561

<211> 248

<212> DNA

<213> *Pinus radiata*

<400> 1561

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agttgttaaca	gtttgtggaaa	gggaaatgaa	cactaataact	gtctctttcc	ttccatcggtt	180

catggaggca	ctgaattact	actcagctgt	gtttgaatcc	ttggatgtta	gcctcgaaag	240
ggaaaacc						248
<210>	1562					
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<212>	DNA					
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gctgaggagg	atacaatttt	gagtgaaact	atcaaaactc	atggagtgtg	tcgatggaca	180
tctcttccca	agaaagcagg	tctaaaaacg	tctgggaaga	gttgagatt	acgttggttt	240
aactatcttc	gttcagatat	caagcatgga	aacatttttc	cggagaaga	ggaactcctc	300
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<210>	1563					
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<210>	1564					
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gaatgcccc	tctggtcgtg	tgat				324
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<212>	DNA					
<213>	Pinus radiata					

<400> 1566	
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gcgtcgccaa atgtggagaa accccagaga gtccggacag agccattccc agcctccaga	180
gaaagataga ggaataaactt tcggccaatt taaggggaatc cgaatgcgaa aatgggggaaa	240
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<210> 1567	
<211> 353	
<212> DNA	
<213> Pinus radiata	
<400> 1567	
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tgaagcatcc actgagccag tggagggaaga actagtgtat gaggccaaaa atggagattc	180
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ttcagaagga agtaaaagcaa cgagtacagc aaaaagacaa gatgtccagg gtttaaaacg	360
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<210> 1569	
<211> 349	
<212> DNA	
<213> Pinus radiata	
<400> 1569	
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<213> Pinus radiata	
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tgacactata	aagaaggaat	tattgatgaa	ttcttgaag	ttggcagcta	aagaagcaaa	300
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agaagtgcg	atgtgtggcc	gagaggcgat	aataagaatt	cagtgactca	aacataatca	420
tcctgttgcg	agactgatga	tagcactgca	agaactlgat	ttgggaagtc	tccatgcaag	480
tatttctact	gtgaaggatt	ccttaattat	ccagacagtc	attgttaaaa	tgaccagagg	540
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<210> 1571

<211> 469

<212> DNA

<213> Pinus radiata

<400> 1571

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agtggaaaga	gaagcagatg	atgagattat	cgttgaattc	gtagatgtta	accgggacag	180
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catatgcacc	ttaccgtttg	acggttttag	cggagcagat	gataaacagta	cggttagtaa	300
taacaataac	aatagtagaa	aaattcttgg	gactttgaat	acatggctgg	catttgtctg	360
cattgacggt	gtgggtgcacg	cttgggacgc	tgacagcggc	gcacgactct	accgtttggt	420
agaacaagtc	ggcgatgtgt	tcgatttggt	atcagacaat	gaacacgtg		469

<210> 1572

<211> 337

<212> DNA

<213> Pinus radiata

<400> 1572

gggaggcaga	gaaggaaacg	aaaaaggagt	gaatttttgt	gggttttgtgt	ttattgggaa	60
gatgggggtg	gtgtcgtcca	aggtggagaa	tgaagaatta	gtgaaaagat	gcaggagacag	120
gagagcgcta	atgagacagg	cagtcgaattc	caggcacaat	ttgtctgcag	cccacattgc	180
ttatttgagg	gctctgcaca	acacagggaa	tgctctgttg	caatttgcgg	aggggggaatc	240
cagtgctgat	aatggcaatg	ctattgaaga	agcgggcaca	ccaattgccag	cgcacccatt	300
aacagcatct	catcgccatc	ccatgaaatt	ccatcctt			337

<210> 1573

<211> 341

<212> DNA

<213> Pinus radiata

<400> 1573

gttctatata	gtcacgggtg	ttcttttaat	ggctcgttcc	ttctccctca	ccatggagaa	60
gaatatgtac	tgtagtttcta	ctattctgga	gtatgacact	gaggaaagga	gtagttaga	120
ttgggaatgc	gacatgtccg	aggaagaaga	agatcttata	atcagaatgt	acaaacttca	180
cggcaacaag	tggtgcgtga	ttgccggggc	cattctctgga	agaaaagcag	aggagattga	240
gaggtactgg	gccatgagaa	cccaacaatt	gtgcggcgcc	gatgatgcta	ttttgacgaa	300
gaaacagcag	aaaaccaata	tgatatcgat	taagtaccgc	g		341

<210> 1574

<211> 479

<212> DNA

<213> Pinus radiata

<400> 1574

catatcatc	atatgaatat	ggatagcagg	caatcagggg	aagaggaaga	ctgcaacgtc	60
actcggccag	gaggaggagg	aggaatatca	ttacatgtta	gcagcgtgga	atattgccag	120
aagagtgcct	gtgttgccca	tgatatctct	cttgatgaac	aagatctgat	aaatagactt	180
caacaatctc	tgggcctcag	gtgggcactg	attgcggggc	gccttccatg	gagaagaaga	240
gaggagatgt	agaattactg	taaaatgaga	tacacagcca	ctacctcttc	ttcacgctct	300
tgaatctccc	tttctctcgc	caggttatgg	agtggtggac	aactatcgta	atcagatagt	360
ttgggttgat	tcagatttgt	taggtttatc	ttcacttgaa	aatatgtgtg	gatatttgtt	420

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tgtttgtttt atcaaaacca agtatagaag aaataaaatt tgatcgtttt atcgatttta      479

<210> 1575
<211> 402
<212> DNA
<213> Pinus radiata

<400> 1575
attgatggga tcaccccttg gaggaggact tggctctttcc cctagaatgg gtggaggggat      60
tgggaatggc ctcaaggagg atttgggggtg ggcttggcgg gctctcgagc tactgcgcct      120
accattggag cagcatctcc cgccaaccag ctctctctct atggatagg caacagccat      180
ggagacaact caacagatlc gccaatlcct tatgggttgg acgtaagtgt aagagggcagg      240
aaaagaggtg gaccgggtga gaaagtatgt aagagacgtat gataaagaat      300
agagaatcgg cagcaagggtc gcgagctaga aaacaggcat ataccctgtg aattggaagc      360
ttgaagttac cagacgtcaa agaagagaaac aaggaattgc ga      402

<210> 1576
<211> 355
<212> DNA
<213> Pinus radiata

<400> 1576
cttcagccgc ttggagtcca ctteccagct getacatccg ttgtctctca gcgcactgct      60
gccatcgctg gagaagccgt cgctgcctcg ctctgcgagc gcgtctaaag tgcgtgattc      120
gtcgtcaagg tggacaacga tgcccttttc ggggtccccg cagcgccctc gtacgctgga      180
gttccagctg ttcttgatcg cgttgctcgt gcggcccggg agggctcggg caattgtgtg      240
ccatttgttg cgtgctgcg cgtgggcctg cagaatagca gcatcctcgg acgggggtaaa      300
aggctctgtg tccacctgag ggctcagctg attgcaccac cgtagcctgc acgat      355

<210> 1577
<211> 463
<212> DNA
<213> Pinus radiata

<400> 1577
gtgaaacttg agcaatttaa ctgattctg tggagactga tgctgatgag aaaattgagg      60
acaagggagg aagcttgtaaa atgactcgcc accagaaacg caaaattgat gaaatccacg      120
ttgaagaggg tcagggtcat gaggattttg atcctgctag ccttcgagag catgaggagt      180
ttacgaaagt taagaacata gcaaaaggtag agcttggggg gtatgagatt gagacgtggg      240
acttttcacc ttccctcctt gaatacacgc atttgtagaa gttattcttt tgcgaatttt      300
gtctcaattt catgaagagg aaagaacagc ttcaaaagca tatgaggagg tgtgatctga      360
agcatcaccc tggagatgaa atatatcgca atggaaccct ctccatgttt gaggtltgatg      420
gaaagaagaa caagatatat gggcagaacc tctgctatct ggc      463

<210> 1578
<211> 343
<212> DNA
<213> Pinus radiata

<400> 1578
gaaacaccaa ggttgggatn tctagaacga agcatacgac aacagcgcgc atttcaccac      60
ttaggattga tggagcagca cccttggcga ccgcagagag gacttctga acgctctgtg      120
tctgttcttc gtgcattggt gtttgagcat tttctgcacc cgtatccaac tgatgcagat      180
aagcatatat tggctaagca aactggcctt acaagaagtc aggtatcaaa ttggtttata      240
aatgccaggg ttagactatg gaagcccatg gtggaggaga tgtacatgga agaactcaag      300
gaagaaaaag tggaccaagg tacacacaat tctgaagctg aaa      343

<210> 1579
<211> 530
<212> DNA
<213> Pinus radiata

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<400> 1579
 cggcaagtgg gggatgcccg acaatttcta tggagctcag gaagacagtg gtggaagtag 60
 tggttaaacag aagaacttga aggatgggga ccaattccacc agtagtgatg aagctgacag 120
 tgaggtcaaat gaattcaaca ttatgaaaag aagcaattca ggggttggat atgaagataa 180
 caaagaagat ggggggcaag gtgatggcaa tcagtacagg tcaactcact ctcggaagcat 240
 ctccatggat agcattatga gtaagatgca taacttcagt gaagactlgg aacagggaacc 300
 gtctcaaggt cggaatgtca gacactccca tagcaattcg atggatggaa gtacaaattt 360
 caatgtggaa ttcgggaatg ggggaattcag tgcattctgag atgaagaaga tcatggccag 420
 tgagaactgt gcagagcttg caacggtgga tccaaaacgt gtcaaaaaag atattggcta 480
 atcgccagtc ggtcgcagcg tccaaggaaa gaaagatgcg ctatatctca 530

<210> 1580
 <211> 561
 <212> DNA
 <213> *Pinus radiata*

<400> 1580
 ctccactaac tctctcattt caacactcac agcatcggat ccgtgcgata aaacttctat 60
 acttggttcca tctctcagcc caacagccgt aggcgcagcc ccatctatctt cctctaagaa 120
 agcttgatc catcgaaaac ctgacgatct ctacaggaag tgtaacacta caggccggcag 180
 ctgcccactgc tcttcaaaac gcaagaagtc cagagtgaag agaactacta gagtacctgc 240
 agtcaagtga aaattggcgg acattccatc tgatgaattc tcatggcgaa aatatggaca 300
 gaagcccatc aagggtctct cacatccaag aggcatttac aaatgcagca cagtgaagag 360
 ttgcccctga agaaagcagc tagaacgcgc cctggacgat ccaaacgtat tgattgtaac 420
 atatgagggc gaacacagcc attctcatte tggatctgaa aacacagccc tggatctgga 480
 ttctgagagc ccacatacag acaagaacat tattctagtt ttatattacg ctacagaatc 540
 cgccattatt acagcgggat g 561

<210> 1581
 <211> 357
 <212> DNA
 <213> *Pinus radiata*

<400> 1581
 cccagaacgg cataagcact gacaaaggat ttaagatct gtgcgatgtg ggatatggat 60
 ttgcccctccc aagggtcaag tttagtctca tctggttccg tttggactat acaacagaa 120
 aaaattttttg aaaatgctct agctgatttt gataaaagaca cccagataa atgggagaaa 180
 gtggcagcca ggtgctctgg aaaaactgct acggatgtta gaaagcatta tgaagatctc 240
 gtggaagatg ttactttgat tgaagctgcc cgtgtgccct acccagctac agtaactctt 300
 cctgttcaca tgaatggtta gaaaaatcag gcgctatgca cggatggaag caacaaat 357

<210> 1582
 <211> 522
 <212> DNA
 <213> *Pinus radiata*

<400> 1582
 gcgagctagg cggtagctaa gcaggagaga gatttatatt ctgtgtttc agagtttttg 60
 cagtgctgctt aaatggcggg agaaaccatg cggatgtcga gggtagact aggaagttgc 120
 gaggcagaaat cccggccggt caaagaagacc catctcaggg cgtgcgaaa acggccctgg 180
 gggagattctg cagcggaaat cagagatcca tggagaaga ctcgagtgtg gctgggcaca 240
 ttgcacactg ccgaggaaag cgcocgtgct tacgatactg ccgccaggag attgcgcggc 300
 cacaagaacta agaccaattt ttctgtcacc gcgcactacc acaataacgc ttgtgcggcc 360
 gcaatttctt ggaactcagg gctgcactct cagcagccgg atctgaacgc cgcgctcttt 420
 gctttctgat caaacaagag acgtgaagtt tctctggaa cgcagccggt cgaattcgaa 480
 tctcccaaca attctcttca cgtgcacact ctgagcaggg gg 522

<210> 1583
 <211> 530
 <212> DNA

<213> *Pinus radiata*

<400> 1583

ggcaggagtt	cccgcaagct	ttaagaaccc	ttccctttgt	gttagacctc	caggttcttc	60
aggtacgcag	tctctacatc	gcgtgacgtt	caagggagac	gggatatcca	gagtcgcac	120
gccgcgatgg	ccgtgacac	catcacagat	gcgagagtg	gtgtaaaaat	gaagatcgga	180
ggagggcggt	gcgaggaaga	ggcgtcctcg	gctgtgaagg	aaacgcattt	cagggagtg	240
agggaaagcc	cgtggggagg	attcgctgcc	gagatcacag	atcccttgaa	gaaaaccaga	300
gtctggctcg	gcacttttga	cactgcagag	gagggcgccc	gagcctacga	taacgctgcc	360
agaaatctcc	gcggggccaa	ggcgaaaact	aattttcttc	tgctccccca	caatgacatt	420
agcaccagag	gcagcagcag	cgccgcctcg	tcgagcaata	gcaccaccag	cgccgcctct	480
ggtcaaatcc	aaaaccaatg	gcccctgcgg	ccatatattct	attcgaaatca		530

<210> 1584

<211> 435

<212> DNA

<213> *Pinus radiata*

<400> 1584

gcatttgcct	gctcgacac	atagtagtct	gatctctg	cttcgagcac	tacgagaatt	60
gcttcaccat	tacctctatc	atccaccaat	ggcgcccgaa	gatttttaag	acaagaatgc	120
tgattttcaga	aagctccggg	ccaaaccaga	caacaagatg	tgctttgact	gtaatacaag	180
gaatcccaca	tgggcatcgg	tcacttaacg	gatttttcatc	tgccctggat	gttctgcac	240
tcctgctagt	cttggtgttc	acattagctt	tgctcagatct	gtaaacctgg	actcatggac	300
tcctgaacag	ttgaagggtca	tgagcttttg	tggcaattggc	cgaggacata	cattcttttaa	360
gcagcatggg	tggaatgatg	gaggtaaaat	agaatcgaaa	tacacatcaa	gagcagctga	420
gctatataga	cagct					435

<210> 1585

<211> 362

<212> DNA

<213> *Pinus radiata*

<400> 1585

gaaagacttg	cagcttaccat	ggtggagggt	cttgctgcac	gaatagcatc	ttcaggaaac	60
ggaatatata	aagcttttgaa	ttgtaaagcg	ccaccaagca	ctgatacttt	atctgccatg	120
caaatattatt	ttgaagtttg	cccataatttc	aaattttggt	gcattggtggc	caatggtgca	180
atttgtgaag	cttctcaagg	tgagcagaag	gttcatatata	tagattttga	aattggggcag	240
ggaagtgcagt	acataagcct	cttaaatgtc	cttgacagaaa	ggcctgggtg	gctccacatc	300
ttgctgcataa	ctgcagtaga	tgatctcgaa	gatgtaagat	alatctctgg	gggatgggat	360
aa						362

<210> 1586

<211> 362

<212> DNA

<213> *Pinus radiata*

<400> 1586

caggagccga	aaagacaaac	tacgaacaaa	atccctgtcc	aaataacaag	aaaaatggca	60
gagtcacagg	ggctgctctac	acattacaaa	ccgtacaggc	agaagcagac	gtctctcaggc	120
caccgtggag	cggtctctgtg	cgtgaaattc	tcaaaaggacg	ggcgtctcct	gggcagcgct	180
tcctctggaca	aaacaatatg	catatggctg	gcctctgctt	cttctctctac	ctctgcattc	240
aagcgggagc	tccacggcca	cagcgagggc	gtctctcgact	tcgctgggtc	gtccgactcc	300
cgctatatct	gctcggtctc	tgacgacaag	agcctccgca	tctgggacgt	ccacacgggc	360
ga						362

<210> 1587

<211> 389

<212> DNA

<213> *Pinus radiata*

<400> 1587
 ctctgggtctg cctgggtgagc tttctgaatt tctcgccaag tgaagtgaag gatccagcct 60
 tgtttcagcg aaacctgttg tgggtttggg ttttcttggc ttttgcttt tcattctttg 120
 tttcttggga ttggaactcg agatctcctg aatattatgg cacaggagag ctggaaccag 180
 gaggagaccg ggtgccaaag cccggaaggg ctctatgcgt gtgccaaacaa ctgtgggttc 240
 ttcggaagct cggccaccat gagtctctgc tccaagtgtt accgcgaatt cgtgctgctc 300
 aactccctca aatcgtcctt cgataagcgc caacagcagc tggcgatgca ggacgaggta 360
 tctatcccgga gaccgcagct tgctgctga 389

<210> 1588
 <211> 416
 <212> DNA
 <213> Pinus radiata

<400> 1588
 cagcaatggc ggcccagact atcatcgctg cctctatggc atctcctcta acattatcaa 60
 atggccacta tccgttttnag tccgagttca aggggtccgt gggtcgaatc ccgcagaggg 120
 cattttcctt cgcgcctgca gcccgggcgc tgaccgtcgt cgcataggcc aagaaggccg 180
 ttgcgcgcgt caaagggaat tcacaggtcg aggggtgtgt cagtctctcg cagggaagaca 240
 ggggtccac aacagtgaag gtcggtttga caggactgac tctctgggaag catggctttc 300
 atctacatga gtttgggtgac acaaccaatg gctgcatatc aacaggagca cattttaatc 360
 caaaaaaatt gacacatggt gctcctgagg atgatgtacg ccattgagggt gacctg 416

<210> 1589
 <211> 507
 <212> DNA
 <213> Pinus radiata

<400> 1589
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 cagggatgtt acggctccag agcttccccc tggagacatt aggcctttgca acaattgtta 120
 caaacaagga catatagctg ccgagtgatc gaatgagaag gcattgcaaca actgtcgcaa 180
 gaccgggcat cttgctcgtg actgcacca caacccaggt tgttaattgt gcaatatatc 240
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 attttatgac gataggcgtg gaagatttaa tgacataatc tgtaggacat gcaacgagcc 360
 agggcatacc agtagggagt gcactggaa tctcatctgc cacaactctg ctgcgcgtgg 420
 acatgttgca tacgaatgcc cctctggtcg tgtgatgctg cgggacatgc gcaggcattg 480
 atgctgcagtt tctcacacca cctgact 507

<210> 1590
 <211> 370
 <212> DNA
 <213> Pinus radiata

<400> 1590
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 aaggtctctga tcaacccttt gacaagataa aaatggacag aaatctcagaa ttttatgaag 120
 agacatcgtc acagaaaaat caggcatcgc gatcaagtga tggaggtagt tttgatgtga 180
 atctttgctt agaattagcc caagatctctg tggtgactca atgtgggtcat cttttttgtt 240
 ggctctgcct ataccaatgg ctacagatgc actccatattc aaaagaatgc cctgttttga 300
 agggcggtgt agttgaagag aaggtaattc ctttatatgg gaggggtaag gtgggttctg 360
 ctgatccaag 370

<210> 1591
 <211> 308
 <212> DNA
 <213> Pinus radiata

<400> 1591
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 aatttcgaag atggttagat cttcttgcta ttaaaagcaa ggtcatagcc gtgggatttg 120

gacccctatg	gaggatatga	ttctctctga	atcacctcga	attcatggca	gtgatggatg	180
gaaaaatatt	gctaaaacag	caggtcttaa	acgatgtgga	aagagttgca	gattacgttg	240
gttgaactat	cttcgccccg	acattaaaacg	tggttaacatt	tctcctgatg	aggaggacct	300
cattatta						308

<210> 1592

<211> 361

<212> DNA

<213> Pinus radiata

<400> 1592

ggatattctg	gtgtgcatg	ctattctggc	catgaatttt	ggcagaatgt	gcgattaggg	60
tttgattctg	gggtgtcttt	tcaggtacag	cagagatttg	aaggggattt	gaatttgatt	120
catggaagt	gagtgctgca	gcctcggctc	ttccgctcag	gggtgtgagg	ttgacatgaa	180
gccaacgatg	gtggtgggaag	atacgtctaa	tcaaggatgc	atgcaatag	gatgttcaca	240
ctaccgcggg	agatgccaaa	taagggtctc	gtgttgtaat	gaagtctttg	actgtaggca	300
ttgtcataat	gaggccaaaa	attcaatgga	tgtccatcca	cttgacagac	atgatgtacc	360
g						361

<210> 1593

<211> 378

<212> DNA

<213> Pinus radiata

<400> 1593

accaagctca	tcacatggcg	tccgagaagg	aagctgctct	tgtgtccaca	ccaccagaag	60
atgataaacc	tacaattatt	gacaaaatc	tgcagaagga	gattcccagt	acagtgtgtt	120
acagggatga	gaaggtactt	gcattcaggg	atatcgcccc	ccaagcacct	acacacatca	180
ttatcatccc	caaagtaagg	gatggcttga	ctggcctatc	tnaggcgaga	gagtgccatg	240
aggatatctt	aggtcactct	ctatacactg	caaaaagtat	tgcaaacgag	gaaggtttat	300
ctgatgtgct	cagaattgtc	attaacgatg	gtcctacttg	atgccaatct	gtgtaccatt	360
tacatatcca	tctactcg					378

<210> 1594

<211> 333

<212> DNA

<213> Pinus radiata

<400> 1594

gattgacgga	tcgattgcaa	tggcgtttgc	ggaagagtat	tccgatcgcg	atgccgtatt	60
tcgaaagctg	aaggcggaagt	ctgaaaacaa	gatttgtttt	gattgcaatg	ctaaaaagtc	120
cagttggggc	tccgtgacat	atggagattt	catttgtctt	gatttgttcag	caatgcacgt	180
gagttcttgt	gttcattgtca	gttttgtgag	gtctacaaat	ctcgatacat	ggaccatgga	240
gcagttgaaa	ttgatgagct	ttggttgtaa	aaagcgtgca	caattattct	ttaagcaaca	300
tggttggact	gaaggtggga	agattgaatc	aaa			333

<210> 1595

<211> 356

<212> DNA

<213> Pinus radiata

<400> 1595

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cctgggggtc	cgagagtttg	tggaaaccga	gacctcctgg	ccagatgaaa	tcaacccaag	120
gttgaagccc	gtgacatttt	cgtatctgct	gcagaggatt	cgtgagcgat	taccagtagt	180
tcggttcggc	gttttagcgg	aggagggcgg	tgatgaggat	gttatgtcgc	ctgtttgtct	240
aaataacatg	cagagggcatg	aggagatccg	aaggctaacc	aattgcgctc	acatcttcca	300
cagagactgt	atggacaaat	gggttgatca	tgaccagaac	gcctgtcttc	tctgca	356

<210> 1596

<211> 378

<212> DNA
<213> *Pinus radiata*

<400> 1596
gtcaacgaga attgcccaga tgggttaagt tggatttagg tctgggaagc tttaggataa 60
gttaattgtac cgaagtgtgg ttaatttttag taaagaggat tgtgttttat catgaggatc 120
cagtgcgatg cctgcgagca ggcagctgct tcagtgtatg gtgtgtgcaga cnaggctgct 180
ttgtgcaggg agtgtgatat aaaagtcacg aaggccaaca agcttgccag caaacacaaag 240
agattgcttc ttgtcggaac ttcccacaag ctctctcgct gcgacatttg ccaggatagg 300
gcagccatcg ttttctgtct cgaagatcgt gctatgtgtg gccaaagactg cgatgagtc 360
gttcattctc gcgacaca

<210> 1597
<211> 387
<212> DNA
<213> *Pinus radiata*

<400> 1597
tcgataatag cagggagagt ccccgccga acagacaacg aaataaagaa ctactggaac 60
actaacttga gcaagaaact tgctgtcagg ggaatcgatc ccaagactca taaaaaaatc 120
acgacgcagc gcacgaacag agtcaacggt gatcgtttca gccagaggaa aggtgagaaa 180
atatatgat ctccacagaa acctcgacag ccggaagaaa atgttgcgag gggcccccac 240
tcaacagggc tcgtgtattc taatgtttcac aatctaaaaag cggattttaa agcgcaatat 300
attgcaagaa tcagagaatt taaaagctct aatactatca gctctcttc tgcacttaat 360
gcacagattg agccaaaagt cagagag

<210> 1598
<211> 276
<212> DNA
<213> *Pinus radiata*

<400> 1598
ggtttgcag atttgggtgac gagaatgaga aaaaccgagc catgactgaa atgaatgggt 60
tttattgtct tccaagacct atgcgaatta atgaagctac accaaagaag tcttgggat 120
ttcaacaacc ttattccatg aaaggtaact attacacaca ggcataatgtt ggtgcagattg 180
ctagtcaggc ctctcagtc gacaatgatc caaataatc aactatattt gttgggtgggt 240
tagatccaaa tgcgacagat gaagatctga ggcagg

<210> 1599
<211> 374
<212> DNA
<213> *Pinus radiata*

<400> 1599
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aaaaggatga agactttgtt gcagaaaaacg atgatgctgg atctccaaca gatgagtcag 120
aagaagaggg atcagatgca agtgagagtg cagaggtcaa gcaacctgca aagaagaagac 180
taaaagaaaa aaaggcggtg gctcccaagg caaccgagac caagaagaag aagaaggacg 240
acgaggaaga gggaggaaag aaaaagcagc ggcgaagaaa gaaggatcca aatgcccaca 300
agaaagccat gactggattt atgttctttt ctcaagtga aagagagaat ctgaaaaaga 360
gtgacccaag aatg

<210> 1600
<211> 334
<212> DNA
<213> *Pinus radiata*

<400> 1600
gatctgtgtt gctgtttgat tccgcaagct tggggagatc aggatctgct ctttgttgta 60
aatgtcgata ttaccacaaat cagattccat tcatattagg gaagatggg ccgataatct 120
ggaagaggag tttaatctga tcagggaat tgtgtgatgac taccctctga tagccatgga 180

cacagagttc	cctggcatag	ttgtgagacc	cgtgggcaaa	ttcaggaccg	tccaagaata	240
caattatgaa	acccttaagg	caaatgtaga	cgtattgaaa	ttaataacaat	tgggggtgac	300
gttttctgat	gaaacggcaa	cctcccaaac	tgcy			334

<210> 1601
 <211> 401
 <212> DNA
 <213> *Pinus radiata*

<400> 1601	
gttagggcag	ctcttagttc
acggaaaggg	ttatttaagaa
gtcaggagtg	gtgggtggaaa
atacagcaac	atccagaatt
gtacacagtg	gtggagggaat
agccgcgagc	ctgccgcttg
tgaaaagggg	cagagcgtgt
gagtcggggc	cgtgctcttt
cgattttccg	actgtgccag
tgcttccaa	ttcaaggccg
gagggccaa	gagtgccggg
tcctggtagc	gcgaagccc
cgcttcagac	tgccgcagcag
agcctcggn	g

<210> 1602
 <211> 462
 <212> DNA
 <213> *Pinus radiata*

<400> 1602	
ggtttgtcag	atttgggtgac
tttattgtct	ttcaagacct
ttcaacaacc	ttattccatg
ctagtccagg	cttccagtc
tagatccaaa	tgccagacag
tgtatgtgaa	aataccagtg
ctgccgagga	agcttttgaa
ttcttggggg	cgattctccag
gagaatgaga	aaaaccgagc
attcacaaca	ggcctatargt
caaatatatt	ggttgggtggg
ggagagattg	ggttgggtggg
acaattcacc	aaacaggtcct
ctattgcctt	ggttgcctt
gactgcgaagc	tg

<210> 1603
 <211> 358
 <212> DNA
 <213> *Pinus radiata*

<400> 1603	
cagcgaagcc	gatttccaaa
cgactggcg	gaaagggtag
gcagatgaca	agagacttca
attgaagaag	tcaattattt
caggctttcta	ttgctgcca
caagatcttt	ttcctgggtat
gagaaactca	tgaagatggc
caattcataa	gactgccacg
cgctgaataa	catccctgct
atatttgtaa	cccaaaaggtc
catcgcaaac	aaaaaaactt
agagttttgc	caatctga

<210> 1604
 <211> 358
 <212> DNA
 <213> *Pinus radiata*

<400> 1604	
accaagctca	tcacatggcg
atgataaacc	tacaatat
acagggatga	gaaggtactt
ttatcatccc	caaaagtaag
aggatattct	aggtcacctg
ctgatggctt	cagaattgtc
tccgagaagg	aaagctgtct
gacaaaatac	tgacagaagg
atattcgacc	ccaagcacct
ctggcctatc	taaggcagaa
caaaaagttat	tgcaaaagcag
gtcctactgg	atgccaatct
ccaccagaag	acagtgggtt
actcacatca	gagaggtcatg
gaaggtttat	gtgtacca

<210> 1605
 <211> 461

<212> DNA

<213> *Pinus radiata*

<400> 1605

gcggacttta	ttgtaaaaga	gccaatgggtg	attggtcatg	agtctgctgg	aataattgag	60
gaggttggca	gtgaagtga	acatctgggt	cctggtagacc	gcgtagcttt	ggagcctgga	120
atatcggtgt	ggcgttgtga	ccaatgtaag	cgaggctcct	acaatttgtg	tcccggagatg	180
aagttttttg	caacacctcc	cgtgcatggg	tccttggcca	atcagattgt	tcatcctgca	240
gatttatgtt	tcaagtgcgc	agataatgta	agtcgcagg	aaggtgccat	gtgtgaacca	300
ctcagtggtg	gggttcacgc	ttgtgcgcgt	gcttctgtag	gtcctgagac	aaatgtcttg	360
gtaatggggc	aggtcctatc	ggccttgta	cgtgctgtgc	tgcacgtgca	tttggagctt	420
caegaattat	tattgctgat	gtagatgaag	agcgtctgtc	a		461

<210> 1606

<211> 463

<212> DNA

<213> *Pinus radiata*

<400> 1606

gccactgttt	gtatgtgatc	tccgggcctt	gagcttatac	gtttttcagt	tgcagggttg	60
gagcctgttca	aattataact	accatgattt	ggaagaagc	tgcgacagt	ctacacaagg	120
cccaacatct	ggagagacca	cccttcatct	ttactgtatt	tatcgcatct	tttataggat	180
tccgcgcctt	ctcgtatctc	atcactaac	gtagaactag	ggaattacga	ggaatcccg	240
ccggcacctt	tggatggcct	ttgatcgccg	agacattaga	atttctggga	tgcagagaaa	300
ggggaaagcc	ccaggatttc	tgtgaccgtc	gaacacagaa	gtatggaac	gtgttcacca	360
cttcccttgt	gggcacccga	cagtggattt	atgtagctcc	caaggcaacc	gcttcttgtt	420
cgccaacgag	aacaaactgg	tggtaaattc	atggcccgcc	tct		463

<210> 1607

<211> 410

<212> DNA

<213> *Pinus radiata*

<400> 1607

tcctgacttt	gctaatagaa	catttcggccc	aagcttagtc	gttggtatcg	ctgccctgtt	60
ctctctcaatg	ctatgctttt	tgttggttcaa	tgcctcgctc	cgctgcagac	ggctctacag	120
gcgatggcga	gtgggtgtcg	agccatcacc	caatatggat	gtcgaaagaa	ctgaatctgg	180
catcgagaaa	aaggattttt	aagcactttc	agccacagtt	taccgcaaa	cccacccct	240
cgagagccat	gattgcccac	tttgccctgg	ggaattcaaa	gaaggagaaa	aggtgagagt	300
attaccagaa	tgctctcatc	gtttccatgc	agattgcata	gacgcattgg	gtgtttccaa	360
tgcttcttgt	ctctcatgtc	gacacactgt	cctttgcgca	ttgcggaaga		410

<210> 1608

<211> 357

<212> DNA

<213> *Pinus radiata*

<400> 1608

taataattgg	gtactctgga	gattttcctg	tgcatgtgac	attacaattg	ctgagacagt	60
ggttttgaa	gttggcaltg	cttgcgaagg	ttgtgttgga	gctgtaaaa	gagttctcaa	120
taaaatgaaa	gggtgtgaaa	catatgatgt	gaactlgaag	gagcaaaaa	taactgtgaa	180
agggaaactg	aagcctgatg	cgttctgca	aactgtttca	aaaactggaa	aggaaccatc	240
cttctggcca	gaagagaagg	atgccaccac	gtgatgggtg	atattctcag	gtttaatata	300
gatatggaca	tatatltga	atgctttttt	gaggcacttt	taataatatt	tctaata	357

<210> 1609

<211> 222

<212> DNA

<213> *Pinus radiata*

<400> 1609

cacaagaacgc	gggaaggaag	aggatgaatt	tgtacagagg	catcagacag	cgctccatggg	60
gaaaaatgggc	tgcgcgagatt	cgagatccca	gaaaggggggt	taggggtttgg	cttgggaacgt	120
ttaacacggc	cggaggaagc	tgccagggcc	tatgacgcag	aggcttagaa	gattagagga	180
aagaaagcta	agcttaacct	taccgatgat	tcatgctcag	ta		222

<210> 1610

<211> 302

<212> DNA

<213> Pinus radiata

<400> 1610

gttcagccta	tgggtgtctg	ctaaatcgct	tcacacaaatg	tcgatccatc	tggagagacc	60
tcttataact	gaaatatacaag	tgcgtatgga	ctgtaatggc	tgcgttcaga	agatacgcag	120
agctctgcaa	actcttcaag	gcatttatga	cgtttacata	natttcccc	aacaaaaggt	180
gacagtggta	ggatgggttg	atccagacct	attaatgaag	gccataaaga	aagcgggaa	240
aagagccaaa	ctgtgcagcc	acgtacgcga	tgaagaaacg	gtcagagag	ccgacccggc	300
gg						302

<210> 1611

<211> 268

<212> DNA

<213> Pinus radiata

<400> 1611

gaatgaagtt	agatacggca	aagaaaggcc	ttcctccagg	caccatggga	tggcctctct	60
ttggagaaac	tccgtatttt	ctcagatatg	gtcaacaatt	tatcaaaaac	agaaaggcca	120
gatattggga	tttgttcaag	actcacatlc	taggatggcc	gacggtgata	tcgacggatc	180
cagctctcaa	cagatatatc	ttattgaatg	aaggccgagg	actaatccct	ggataccggc	240
agtctatgct	tgacacattg	ggaaaaatg				268

<210> 1612

<211> 312

<212> DNA

<213> Pinus radiata

<400> 1612

gctcactgga	ataaacactc	ttcgcattcca	gcccttcaaa	cttcccctct	tggcccccct	60
gatgcgaagg	tgcgcgatgaa	ggctgtgggt	atctgtggca	gtgacgtcca	ctatttgagg	120
acattacggg	gtgcggcactt	tattgtaaaa	gagccaatgg	tgatttggtca	tgagtctcgt	180
ggaataattg	aggaggttgg	cagtgaagtg	aaacatctgg	ttcctgggtga	cgcgtagct	240
ttggagcctg	gaatatcgtg	ttggcgttgg	gaccaatgta	agcgaggctc	ctacaatttg	300
tgcccgcaga	tg					312

<210> 1613

<211> 324

<212> DNA

<213> Pinus radiata

<400> 1613

gctggctaca	gcttatgctt	tccgattcgt	gggtgaatgg	atgaaaatggc	tatacttgga	60
gttaacaaaa	cgtttggggg	caaaggattt	ctcaacattg	gctgaagcac	atgcattgac	120
tgcgtgggtta	aagtcattga	caacatcagt	gactgcggat	ggcattgaag	attgtcgtaa	180
gctttgtggt	ggacatgggt	acttgtgcag	tagtgggctt	ccagagctgt	ttgctgtata	240
gttctctcgt	tgccacatgt	aaggagataa	cacagtctct	cttctacagg	tagcaagatt	300
cttgatgaag	acagtcacac	aact				324

<210> 1614

<211> 395

<212> DNA

<213> Pinus radiata

<400> 1614
 gtcccccagga gaggagagcc tcagctgtct cgaatctggcg ttaaggggtt acnagaagaag 60
 aatttcgaag atgggttagat cttcttgcta ttcaaaagcaa ggctcataggc gtgggatttg 120
 gaccctcatg gaggatataga ttctctctga atacattcga atccatggca gtgatggatg 180
 gaaaaatatc gctaaaacgag caggtcttaa acgatgtgga aagagttgca gattaccggt 240
 ggttgaaacta tcttcgcccc gacattaaac gtggttaacat ttctcctgat gagaggagcc 300
 tcattattag gtgcacggc cttcttgga atcgaggac gactaccggg tcgaacagac 360
 aacgaatca agaattactg gcacactcat atgag 395

<210> 1615
 <211> 231
 <212> DNA
 <213> Pinus radiata

<400> 1615
 ttacattcaa ccaagctcat cacatggcgt ccganaagga agctgctctt gctgccacac 60
 caccagaaga tgataaacct acaatatgtt acnaaatatc gcngaaagag attcccaatn 120
 cagnggttta caaggatgag aaggtacttn cnttcaggga tatngcnccc caagcaccta 180
 ctcacatcat tatcatcccc aaagtaaggg atggcttgac tggcctatct a 231

<210> 1616
 <211> 396
 <212> DNA
 <213> Pinus radiata

<400> 1616
 ccggtccggg cgggtggagag catcagcctt ggagttacag accagggaaa tacaagatgg 60
 gtatgtctcc ttgctgctcc aaagaggggc tcacccggcg ggcctggacc aaaagggagg 120
 atatgatctt ctccgaatalc gttcgaattc atggcgatgg tggatggaga aatctctcgg 180
 aaaaagcagg tcttaagaga gtgtggaaga gttgcagact acgctgggtt aactatcttc 240
 gtcccgatat taaacgcgga aacatttgcc ccgcccagga ggagcttatt attcggtctc 300
 atcgctctct tggcaatcgg tggctactga tagcaggacg actgcctggt cgaaacagaca 360
 acgaaatcaa gaactactcg aacactcatc ttgagc 396

<210> 1617
 <211> 296
 <212> DNA
 <213> Pinus radiata

<400> 1617
 gtcggcgtcg gcggcggtcg cgaggaaacg gcggcgctcag ctgtgaagga aacgcatttc 60
 anaggcgtga ggaagaggcc ctgggggaga ttgcctgcgg aaatcagaga tccctggaag 120
 aagacgagac tctggtctcg cacttttgac acagccgaag aggcgcggcg cgctatgat 180
 aatgcgcga gaaatctaac cgcccccaag gccaaaacca atttcgctat ccacgacgat 240
 agcgcggcc ctgttcaaca gtggcggtcg acgcgcgtc cctagtacg gacaa 296

<210> 1618
 <211> 381
 <212> DNA
 <213> Pinus radiata

<400> 1618
 gagctttctc tcaagaacat tcttacagca aatgagcaga ctacaactgc agaaccaga 60
 aataataata cagttgtttt attactaatc catctgtcag agtgcggat 120
 ttaccgtcta ttccactgtt atgtaaaaag tatggagcat ttcttatagt agataataca 180
 ttgtctaac cgataaggat caagcccatc aagcaggggt ctgacatggt catctatca 240
 glaacgaaat ttcttggtgg ccatagtgat ctgggttcag gagttagtgc aggcctcttc 300
 caccacatag agttagcttc aaagctggta ggtcgctggg ggctgcttgc tgcctcatc 360
 gattcatggt ttgcactcg c 381

<210> 1619

<211> 373
 <212> DNA
 <213> Pinus radiata

<400> 1619
 cggtccatgt gacttcgaca tccatgagtc ctgcgcccac gtcctaacg ccactctcca 60
 ttctctgtcat ccccagcatc ctctcgtgtt gagggacaaa ccagtttcac cacaacgcgt 120
 atgcgacgtc tgttgaagggt atgttttagg attcgtttat gactgcccgt aatgtgaagct 180
 ggacgttcat ccctcctgtg cacagctgcc gcagacgctg cggcacgctc tgcattccaca 240
 ccacaccctt caactctccc atggacctga agctcccgcc cctcctgcac gctcctgtaa 300
 cgtatgcgga gaagcctgta gccctgggca ctggagctat cggtgcgaat tagcagctgc 360
 gccgtgtgat ttc 373

<210> 1620
 <211> 137
 <212> DNA
 <213> Pinus radiata

<400> 1620
 caccgggttc agaccttttt catcttcatt attcttccgc ctgtgaaaag atggggagat 60
 ctccctgctg tgaggaagct catactaaca aaggggcctg gactaaacaa gaagatgacc 120
 gccttategc tcacatt 137

<210> 1621
 <211> 372
 <212> DNA
 <213> Pinus radiata

<400> 1621
 gttcccagga gaggagagcc tcagctgtct cgaatcggtg ttaaggggtt acagaagaag 60
 aatttcgaag atgggttagat ctctcttcta ttcaaaagcaa ggtcataggg gtgggattttg 120
 gacccctatg gaggatatga ttctctctga atacattcga attcatggca gtgatggatg 180
 gaaaaaatat gctataaacg caggtcttaa acgatgtgga aagagtgtga gattacgttg 240
 gttgaactat ctctgcccgc acattaaacg tggtaacatt tctcctgatg agggaggacct 300
 cattattagg ttgcattggc ttcttggcaa tcgcaggacg actaccgggt cgaacagaca 360
 acgaaatcaa ag 372

<210> 1622
 <211> 464
 <212> DNA
 <213> Pinus radiata

<400> 1622
 ctgaattgca ttctttatgc ggcaaaaaata ttaagagtc aagacaaaaga gggggttacg 60
 ggagcaggct gcgggttcga tcccaagata aggaaaaaag aagaaaaatt tcattgaattg 120
 gccctgtaga ttccagtcac gaaattaaaa cctatcggtc tcgtcttcga gctaaaagtgtg 180
 gggaaaaaagc taagctctca ggggaatgggt tccgcacaaa tgcgtgtcct taatgggtggc 240
 cggacacctc agttccaacc actcgttcgt cagaattctt tatacaattt aacgctggag 300
 ggagtcacga accagctcgg ggacgcgcagc aagccactta gcagcatgaa catggacagc 360
 ctctgaaga acatttggac acaagagaaa gccaggctat tccatgggc atcgggaattg 420
 gccccatgaa cgggtgttct cccaactctg cccctgccag cggt 464

<210> 1623
 <211> 436
 <212> DNA
 <213> Pinus radiata

<400> 1623
 aagaaaaatg ggcctgaatg totcagggag gggttttaaat tgaatgagta gggttttctg 60
 gggtgagat ttctcatatt tatgcgtaaa acgttgactc caatcgcgct gaaacaaacc 120
 aatagaatac ccaaattgat ttctttcaat ttcatctgat acacagagag aattcagtc 180

gtggaagtc	atgtctaacat	aacgtctgcc	tctggagagg	ccagcgtttc	tcttggcaat	240
ccagctgcga	tcgctgtagat	tgagagacct	cgggcaacgac	caccacaaca	attctcaaca	300
caacgctgtc	caaatggcgc	cggaaatata	aacagctgtc	agcaaaaccc	agagaagaag	360
agaagaagaa	atcttccagg	aactccagac	acagatgcag	aagtgatgtc	tctgtcgcct	420
agaaactctc	tgctcta					436

<210> 1624
<211> 337
<212> DNA
<213> *Pinus radiata*

<400> 1624					
gccagagcgtg	tggtgtgttc	cagaagagga	tatcatcagc	tgctcaggtt	gtctcaagag 60
actacagactg	aagaatatag	aagatgggtg	gatccctctg	ccccccaaaa	gaagcgctta 120
acctgggggc	ttggcacaggc	atggagctga	cgattctcac	cgagacattc	cgagttcatg 180
cgagtgcttg	ctggaaagat	attccaaaa	gcagaggtct	taagagaggt	gcaaaagatt 240
gagatgtgc	ttggctgaac	tatctctgtc	ccgatataa	acgtggtaac	attatcctc 300
ccaaataaga	cctcattatt	cgatttcact	gccttct		cgctg 337

<210> 1625
<211> 421
<212> DNA
<213> Pinus radiata

<400> 1625									
ctgaagctgac	gtcgattgtt	cgggaggata	gcgttttcga	agttcgttgt	tgagttatct				60
ccgcagactc	tagaatttta	gggtgtcttc	ccacaaaccg	acttttcccg	acttcaaatc				120
tcgatattga	agtgacatgc	cggtcggtta	aagaagaagt	ataagaatg	ctaacgcttc				180
ggccagagcg	gtcacctctc	cgaaagagcc	gagggggctc	tttccaaaac	ctcaggagtg				240
atcgatttta	tgcgaaacgc	atcgatcgct	ctcgtgtttt	ttctcaactc	gaagagctga				300
ccagatctcc	agctccagca	tgaaaatctg	ataggagagc	atcgatagac	agatcgatgc				360
g	gatggaaaagc	caaaatctga	ggagagtcac	gatattccaa	agataaaacca				420

<210> 1626
<211> 315
<212> DNA
<213> *Pinus radiata*

<400> 1626						
tgcatcttcag	cagtcgccatg	gtttcaacaggt	cgaatctctct	tgtgtgacatg	aatccatcaa	60
tatatatacga	gagagagaaaa	tatacgtttt	tcagattttaa	gcattgccggt	ttaataatct	120
gcattgtcag	gcgagatgt	atttgttgtta	gaagttgat	ttctgttttt	ttctcttcag	180
ttagttagtc	caataaagca	gattgcggctc	gtctgcctct	ctgcacaaaa	tgtggtctca	240
acaaggggag	atggctctgcc	gaagaggata	gtcttctggg	aagatatatt	caaacatctc	300
ctcaagagcaa	ttgga					315

<210> 1627
<211> 373
<212> DNA
<213> *Pinus radiata*

<400> 1627						
cacatccata	cactgtggggt	ggacagccgt	tgatgccacc	ttaatgggact	ccactacacat	60
atctctgcaat	gtatccacat	gagggacatc	atgacatcatc	tctcatcgctc	ccgggtggcac	120
tctcgttatgt	tcaactatgga	atggcatcac	tgcgaactgc	tgaagttaca	acgacttttag	180
cacctccaaa	tcttgaagca	ggacccaagt	ctctggaaatg	caggagagcg	aatacaatga	240
agagatagaa	agggaagttta	ggaagccttg	gaatgat tac	tcgcaaaag	gggaagaagta	300
caaggccaac	atcgggatct	gcaaatgagg	ccatgtcaca	aagtggggac	agtggcagtg	360
acqggtcaag	cga					373

<210> 1628
 <211> 512
 <212> DNA
 <213> Pinus radiata

<400> 1628
 cggtaaatagc atagagggat tatacagagg tggattgtta ttgaaaccca gtatggagg 60
 tagagtcttg acaagttggg acaaggagg gaattccacg gatgttatag atatggatat 120
 agggactggg agactaacag gttctgaaaag gagacatgac aaacgggaatc ctacatttac 180
 agaccattat agacattcag acagtgatcg aatgaagatg aacagctact tatatccaga 240
 aaacaacaat agcacggcgc ttgttgcgctc tctgtttgtt cccaggaaacg acaaaactgt 300
 aaagtattgat ggcaacctta taatccatgc agtcttagct ggggaaaaag cctcgagagc 360
 attatctgcc tcacagtcta gaggcaacaa agatgggcat gtacacacca ttccacttca 420
 aaaggaatat gaaaagaata gtttggcagt cagaacagaa aggcacgtcg ctcttgctgc 480
 tgctgccgcc gccactacag attcagccag aa 512

<210> 1629
 <211> 395
 <212> DNA
 <213> Pinus radiata

<400> 1629
 gagaaaaacgg acctgaccat atcgaaacat tcacaggggg agattgatca aacacaaaata 60
 ccgtaaaatc gcagcgaaaaa tccaaaaatc caccatgggg actgtggcgg aggatggcag 120
 caagggttac aaggccgtaa atccccatcc caaaaaaggcg tgcgctcgt ggcgtggtaga 180
 catgggtggg aaatcgggtgg ttgaaacttc tgcgttgtat agttcgaaga agcctctgca 240
 ttctcttttg gggaaactcg ctccagcttc ggaactgccc cccaactcgc acctgctcgt 300
 tgttgggcaa ctctcattgt gcttggatgg agagtctgtg cgcgltgggc ccaalccgaa 360
 attcgcaccg gtatctggct atcactgggt tgatg 395

<210> 1630
 <211> 285
 <212> DNA
 <213> Pinus radiata

<400> 1630
 ctctgcatttt tcttttgggg aacttcgctc cagtctcgga aactgcccc aaatcgcccc 60
 tgctctgtgt tgggcaactt cctagtgtgt tggatggaga gtctgtgccc gttgggtccca 120
 atccgaaatt cgcaccggga gctggctatc actggtttga tggagatgga atgatccatg 180
 gtctcagaat taaagatggt aaagccacat atgtgtcacg ttatgtgaag acatcacgct 240
 tgaacaaga ggaatatctt gggaaagcaa aattctttaa gatcg 285

<210> 1631
 <211> 438
 <212> DNA
 <213> Pinus radiata

<400> 1631
 gtttttcaaa gctcaggttt aacagaaaaat acccgggaaa attaaacaaga aaaaaggaaa 60
 aacagagatt ttgtttattt ctgttattag tctgctaata tggtttttga taatttaatt 120
 aattaaaggcg ggggcccgcga cctccaggca gtggcggaga ccagtgggcg gccctgccac 180
 ccgagggaga gagcccgctg cgctttctcg acttcgaacc cgcggctatg gaggcgctgg 240
 atcaggtact ctgcctcgct ctccgtgaag ttgctgaagg ccaactggga gaagccggcg 300
 gcggcgaaac ggtctctcca tggcggagcc ggccgaggag gaaatggtgg cgtcgacttt 360
 cggagctagc aggaactctt cgactctgtg cagcgccctc atgtgtatgt tcacggcatc 420
 cagtgatctg aacaggaa 438

<210> 1632
 <211> 457
 <212> DNA
 <213> Pinus radiata

<400> 1632
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 aaaaatccaaa attccaccat ggggactgtg gcggaggatg gcagcaaggg ttacaaggcc 120
 gtaaatcccc atcccaaaaa gggcgctgcc tctgtggctgg tggacatggt ggagaaactg 180
 gtgggtgaaa ctctctcggt gtatagtctg aagaagcctc tgcattttct tttggggaaac 240
 tctgctccag tctcggaac tgcgcccaaa tgcacactgc ctgttgttgg gcaacttctc 300
 agttgcttgg atggagagtt cgtgcgcgtt ggtcccaatc cgaaattcgc accgtagctt 360
 ggctatactt ggtttgatgg aagtggaatg atccatggct tcgaatttaa agatgggtaaa 420
 gccacatatg tgtcacgtta tgtgaagaca tcaagct 457

<210> 1633
 <211> 318
 <212> DNA
 <213> Pinus radiata

<400> 1633
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 tgtccatgag tttagaggatg acctggggaa aggtgggcat gaacttagtc tgacaactgg 120
 caatgctggg ggcaggtttg cttgtgggtg ggttggaactc actccacttt aaggccagct 180
 caaatatgga atgatcttca aaggtcatgg acatcgtatg aaaccagtga ctgcaataat 240
 aattccaaaa tatatgttct ttaactctgc aagattgtta gcaatttga tttgtttttg 300
 gtattaaaga gttgcact 318

<210> 1634
 <211> 211
 <212> DNA
 <213> Pinus radiata

<400> 1634
 gccgtggctg ttcccaggag aggagagcct cagctgtctc gatctggcgt taaggggtta 60
 cagaagaaga atttcgaaga tgggttagatc ttcttctat tcaaaagcaag gtcataggcg 120
 tgggatttgg accccctatgg aggatatgat tctctctgaa tacattcgaa ttcattggcg 180
 tgatggatgg aaaaatctcg cttaacgagc a 211

<210> 1635
 <211> 350
 <212> DNA
 <213> Pinus radiata

<400> 1635
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 agcgctctta ttacagactgt tgtatgcac cctctcgagg acggtgtctt ggagtttgga 180
 actactgaag tggagcgaga agaccctgggt ctagtccaac gcaaccataag cttttttttg 240
 gagtaccoca aaccgatatg ttacagagcaa ctacatcca gccacagtg ctcagacaga 300
 gacgaaaagg atcaagtggg catggtcaca ataattgctt ccgacagcat 350

<210> 1636
 <211> 356
 <212> DNA
 <213> Pinus radiata

<400> 1636
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 tgcagtcctt tactagtga ggtcattccg ttccaacagt aatcctcctg attgaaaagg 120
 aggaagaaga gtttctctt gttagacatc ctgaaagacc aatccctctc ctactacgca 180
 attatagctg tctctgtcgt ctgtttccag atataccta ttagatttga tactttctac 240
 ttgcacatga ttacagatgag tttaaccggg gggaggctgg ccagacattg gcaagaaaaa 300
 tcatgtctct tctcgtagat aaggcgcaac agaatacaac attgagtgtg gaccca 356

<210> 1637
 <211> 362
 <212> DNA
 <213> Pinus radiata

<400> 1637
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 tgtttgtggt ttgggttttc ttggcttttg ccttttcatt ctttgtttcc ttggatctga 180
 actcgagatc tccctgaatat ttgggcacag gagagctgga accaggagga gacccggctg 240
 caagtcgctg aagggtctcat gcgctgtgcc aacaactgtg gcttcttcgg aagtcgggcc 300
 accatgagtc tctgctccaa gtgttacccg gaattctgtc tgctcaactc ccttaaatcg 360
 tc 362

<210> 1638
 <211> 359
 <212> DNA
 <213> Pinus radiata

<400> 1638
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 ttggcgctga aggtcacaatt tttctctcga gtttcattga ttctgaaaaa ctggcatagc 180
 tatggcgatg agcaatggga gatttgttga agatttggat aggattaagg ggcctgtggag 240
 ccccgaggag gacgcgtcgc tgcagagctg tgttcagaaa tacgggcccga ggaactggac 300
 cctgataagt aaaggaatcc cggggcgatc cgggaatcgc tgcaggctac ggtgtgtgca 359

<210> 1639
 <211> 299
 <212> DNA
 <213> Pinus radiata

<400> 1639
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 tgccacggca gatgacaaga gacttcaaaag taccttgaaa agaataggcg tgaataacat 180
 cccgtctatt gaagaagtca atatttttaa ggatgacatt gttattcatt ttgctaacc 240
 aaagggtccag gcttctattg ctgccaaacac atgggtgggt agtgggcatc gcaacacaa 299

<210> 1640
 <211> 300
 <212> DNA
 <213> Pinus radiata

<400> 1640
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 aagttgttat ggggggaatt atgctgtgctg ggtcgacgat gattcctgct ggcggcgctg 120
 cggcagcggc ggagacgtcg gtggaggaag gaggagaatt gaataagatc gaaagcccta 180
 caccatcacc aagtcagag aaagctggac tgagcaggag cacaacaaat ttctcggaag 240
 ctatgcagcc gtgttgatag ggactggaag aagaattgaa gcatttgggt ggttcacaa 300

<210> 1641
 <211> 311
 <212> DNA
 <213> Pinus radiata

<400> 1641
 gttcagctgt tcgcaaaagca cggagcgaaa gtcataatcg cagacgttgc agagaaagct 60
 ggcagaaaagc ttgcagaatc cctttctcca gcatcggaac cttatgtgca ctgtgatgtc 120
 agcaaaagag aagacgtgag cgcggctgtg gatctggcta tggataagta tggtaacatc 180
 gacattatgt ataacaacgc tggaaactaac gacagcttcc tgggtgaagag cgtggcagag 240

tatgatattgg	agcaatttcga	tcgagtgatg	aacgtaaacc	tgaaggaggt	gatgcacggc	300
attaagcacg	c					311

<210> 1642
 <211> 350
 <212> DNA
 <213> Pinus radiata

<400> 1642						
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cgctagggtt	tggtctgggt	cctttaatac	ggcggaggaa	gctgctcggg	cttatgatgc	120
agctgcacga	aagatcagag	gtaagaaggg	gaaagtaaat	ttgtgtgatg	agccaccacc	180
ctccgttaag	aaggaaagta	ataatgctaa	gggttcctaa	aaagggctca	gcgaagaaat	240
aaaatcatat	ctaccccaaa	gctcgacttt	ttcgaagggt	tcaaaacggc	gaacctctcg	300
attgcccaat	acaacttcca	tcagaaattc	ccaaacccta	actgtgatga		350

<210> 1643
 <211> 322
 <212> DNA
 <213> Pinus radiata

<400> 1643						
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gggttttgct	gtcatctggg	agaggcgatc	cattcagctt	cgcaggcccc	cgaagatggc	120
gttcgcggcg	acaaccgga	agtgcaaggc	atgtgaaaac	acgggtctatt	tggttgatca	180
attgcacagt	gataattctg	tttttcacaa	atcctgtttc	cgctgcacat	actgcaatgg	240
aaactttaaa	cttagcaact	attogtctgt	tgagggagtt	ctatattgca	aaacctattt	300
tgaccacgtg	tttaagagaa	ca				322

<210> 1644
 <211> 345
 <212> DNA
 <213> Pinus radiata

<400> 1644						
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tctggttcag	aaatggcgga	ctaaaagta	agtggtcccc	gaggtctggg	gttcgaatct	120
cgttggcgctg	aaaggtcaaa	tttttctctc	gagtttcatt	gattctgaaa	aactggcata	180
gctatggcga	tgagcaatgg	gagattgtgt	gaagatttgg	ataggattaa	ggggccgtgg	240
agcccccagg	ggacgcgtcg	ctgcagaggg	ttgttcagaa	atacggggcg	aggaactgga	300
ccctgataag	taaaaggaatc	ccggggcgat	ccgggaaatc	gtgca		345

<210> 1645
 <211> 508
 <212> DNA
 <213> Pinus radiata

<400> 1645						
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ggaaagcgag	caccagagaa	catatccgag	gagaaagtat	actcatatat	taacgtaacg	120
gaaaatggaa	ataatgatga	tcaaggcaaa	ggattacag	aggtccatcc	tcatcccaag	180
aaaggtatcc	tttcatcggt	aattgatattg	gccgagaaaa	tcgtggttcg	ctcgctctac	240
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cgccgcgaca	cagacttgct	cgctattgga	aatctcccta	aatgcttggg	tggagaattt	360
gtcggagctg	gtcccaatcc	cagattttgc	ccccgtcgct	ggctatcatt	ggttcgcagg	420
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ccgtcaaaac	ttcacgtctc	aagcaaga				508

<210> 1646
 <211> 368
 <212> DNA

<213> Pinus radiata

<400> 1646

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gaaaaagaaa	atacaagatg	ggcagatctc	cttgctgctc	aaaagaaggg	ctcaaccgtg	120
gggcctggac	caaaaaggag	gatatgattc	tctccgaata	cattcgaatt	catggcgatt	180
gcggatggag	aaatatgccc	aaaagagcag	gtcttaaacg	gtgtggaag	agctgcacga	240
ttacgatggc	tgaactatct	tgcgcccgac	attaaacgtg	gaaacatttc	ccctgatgag	300
gaggaactca	taattcggtc	ccatcgccct	cttggaacac	gatggctgct	tatagcattg	360
aagattac						368

<210> 1647

<211> 367

<212> DNA

<213> Pinus radiata

<400> 1647

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gattctccct	gttctttgtt	ctgttgctgt	aaagattggt	tgcaggctga	atcgcccagg	120
ccgatttgaa	ttctcttgag	gattgacaag	atgacgcgca	agtgcctcga	ctgtggccaac	180
aacgggcata	actccaggac	gtgccctaac	cgcgccgggg	tgaagctctt	cgcggtctcg	240
cttaccgatg	gcccgatcag	aaagagcgct	agtatggggg	atttggatgat	gatgtccaac	300
cctagctctc	ccgtgaccc	ctccnagccg	gctctgcg	cttctgctgc	cgcgggcgcg	360
gcggcca						367

<210> 1648

<211> 511

<212> DNA

<213> Pinus radiata

<400> 1648

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agaagaagaa	aatacaagat	gggcagatct	ccttgctgct	caaaaagaag	gctcaaccgt	120
ggggcctgga	ccaaaaggga	ggatatgatt	ctctccgaat	acattcgaat	tcattggcgat	180
ggcgatggga	gaaatatgct	caaaaagaca	gggtcttaac	gggtgtgaaa	gagctgcaga	240
ttacgatggc	tgaactatct	tgcgcccgac	attaaacgtg	gaaacatttc	ccctgatgag	300
gaggaactca	taattcggtc	ccatcgccct	cttggcaatc	gatggctgct	tatagcagga	360
agattaccag	gtcgaacaga	caacgaaatc	aagaactact	ggaacactca	tatgagcaag	420
aagctgcttc	cattgaacga	atctcaacc	aagactttgc	ctgtccccaa	gaggaggctg	480
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<210> 1649

<211> 364

<212> DNA

<213> Pinus radiata

<400> 1649

tgcgcctcca	tcgacccaaa	caagtggggg	acatgcata	tgcgaagtgt	gagaacactg	60
cagctgcaat	ccatgtaact	gttcaaaagt	tgacgagact	gttagtggga	aatcctctctg	120
taaatgtgga	gagaattgag	cctgtgaaac	atgcacctgc	agcagagctg	gaatatagcc	180
tagtgtgatt	ttttctcag	ccagaactta	ggattccatg	accactagta	ataagatgca	240
gtatcaatag	cagctgtagt	ttatgtatgc	agtaagttta	taaaagagag	tggttacttt	300
ttggctttag	taatttgggt	cttatgttat	gtatgtagta	agtttatctc	caaatacaga	360
gccg						364

<210> 1650

<211> 354

<212> DNA

<213> Pinus radiata

<400> 1650

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caagagtaaaa	cccgaaggaa	tagaagggga	aggaggcatc	ggcagcgctg	tctctctccc	60
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tcgtcttttga	atctgtgtcaa	aacctactgg	atcgcttgaa	cactggaaat	atggaccatg	180
gttgtagccca	ttacaggaga	cgatgtcgga	ttcggggccc	ttgttgcaat	gagatctatg	240
attgtaggca	ctgtcacaat	gaagccatga	gccatctaaa	ggacccttg	ctgcgcatg	300
agctcccaag	atacaagtt	gaacgggtta	tttgttctct	ctgtgacact	gagc	354

<210> 1651

<211> 424

<212> DNA

<213> Pinus radiata

<400> 1651

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tcactacaag	cttttagcaa	gcctcacaaa	taagctttgc	agtaggatgt	ctctctcccc	120
gtcatattcc	atgttttcca	attcaggaa	gggtttaaat	ccctcagtg	catcttcaga	180
accctctagt	caggctctcg	gatcgatccc	ccatcaatat	tcaggctccg	aggaagaccc	240
taaaactgacg	atcgatgaaa	gaaagcagaa	gagaatgctt	tctaacagag	aattcgcaag	300
gaggtccagg	atgagaaagc	aacagcattt	ggatgaattg	agagcccga	cagctcatct	360
cagagcagag	aacagtcata	tgctaacaaa	attcaacatt	gcttcacaga	aatacatgca	420
gctg						424

<210> 1652

<211> 422

<212> DNA

<213> Pinus radiata

<400> 1652

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tcaaaacaaag	cagcgtcgag	cagcaccacc	ttgaacacca	agaagcttga	tgatgagaca	120
gaagttctctg	ctcatgaaa	agtttcatca	gatttgaaga	aaaacataat	gcaagcccg	180
ttagataaaaa	agttgacaca	agccccagct	gcacagcaaa	tcaatgaaaa	acctcagatt	240
attcaagagt	accgagtccg	ggaaagcaat	tcaccaatcag	cagatcattg	ccaagctgga	300
aagggtcctt	gggtgaaac	tcgctggaag	cactggaagt	gaaagaaaat	aactggaagt	360
gtccaatagc	aatacaatgt	catagagttg	tgtgatttgg	cgcttaccac	ccacacctgc	420
tt						422

<210> 1653

<211> 357

<212> DNA

<213> Pinus radiata

<400> 1653

gnacgagctc	gatctggcct	taaggggtta	cagaagaaga	atttcgaaga	tgggtagatc	60
ttcttgctat	tcaaaagcaag	gtcatagccg	tgggatttgg	acccctatgg	aggatatgat	120
tctctctgaa	tacattcgaa	ttcatggcag	tgatggatgg	aaaaatatcg	ctaaacgagc	180
aggtctttaa	cgacgtggaa	aggggtgcag	attacgttgg	tgtgaaactc	ttcgccccga	240
cattaaacgt	ggtaaacatt	ctcctgatga	ggaggacctc	attattagg	tgcattggcct	300
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<210> 1654

<211> 306

<212> DNA

<213> Pinus radiata

<400> 1654

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agaaagctgg	cagaaagctt	gcagaatccc	ttctctccag	atcggaacct	tatgtgcaat	120
gtgatgtcag	caaaagaaag	gacgtgagcg	cggctgtgga	tctggctatg	gataagtatg	180
gtcaactcga	cattatgtat	aacaacgctg	gaactaacga	cagctttctg	gtgaagagcg	240
tggcagagta	tgatagggag	caattcgatc	gagtgatgaa	cgtaaacctg	aaaggagtga	300

tgacag

<210> 1655
 <211> 368
 <212> DNA
 <213> Pinus radiata

<400> 1655						60
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gtcaagcaca	cgcagccctc	agtgtgggtg	cggagaaact	tgcgcttgcg	ccgattgcaa	240
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caagtgtgga	gaacactgca	gctgcaatcc	atgtaactgt	tcaaagattg	acgagactgt	360
tagtgggaaa	tcctcttgta	aatgtggaga	gaattgccc	tgtgaaacat	gcacctgcag	368
cagagtg						

<210> 1656
 <211> 333
 <212> DNA
 <213> Pinus radiata

<400> 1656						60
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agtaagctat	agattgatag	ttcagagaaa	agactgaaag	gcaaaaacta	tatagacata	180
acaacggaga	gagcagcaca	ggaaccaggt	tgcataatgg	ctaggccctc	aaagatagca	240
ggagtcgctc	agagggcactg	gggatcatgg	gtctctgaaa	tccgccatcc	cttattggaag	300
accagaatat	ggctagggaac	attgaaaca	gcagaggatg	cagcacgagc	atatgatgaa	333
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<210> 1657
 <211> 355
 <212> DNA
 <213> Pinus radiata

<400> 1657						60
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aagggagtgg	gagacaagt	ccggaaggcc	ccattcactg	tttgaaacac	tgccgcttct	355
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<210> 1658
 <211> 341
 <212> DNA
 <213> Pinus radiata

<400> 1658						60
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ggttcagctc	atcggagggt	acagcgattc	gaaggcctga	aaacctaaa	aatacctatc	240
cccccttctc	tttgaatggc	ggagaactat	ggcagcccg	atagcagccc	ccggctggag	300
aacgaatccg	gcggcggtca	catgggcggc	agcgatttct	ctgtgaaaga	gcaggatcgg	341
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<210> 1659
 <211> 353
 <212> DNA
 <213> Pinus radiata

<400> 1659

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gaaaaacaaa	gcagaaagcc	accatgtggt	agaggagggtg	ctgaggataa	aggagcttct	60
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gcataattct	gtggaggctt	tgaaggagac	tgataattgt	agacaaagtg	atggactcgc	180
aaaaacattct	tctgctgaca	ttcgaaagct	agtaaaagag	ctcataaggga	agtggaaaga	240
tcttgctgat	gagtggtgta	gcactgcaga	tgaagttgca	gctgctgcaa	ttgttgatgg	300
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<210> 1660

<211> 317

<212> DNA

<213> Pinus radiata

<400> 1660

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gtcgtctttg	aatctgtgca	aaacccactg	gatcgcttga	acactggaaa	tatggaccat	180
ggttggtccc	attacaggag	acgatgtcgg	attcgggccc	cttggtgcga	tgagatctat	240
gattgtaggc	actgtcacaa	tgaagccatg	agccatctaa	aggaccctct	gctgcgccat	300
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<210> 1661

<211> 340

<212> DNA

<213> Pinus radiata

<400> 1661

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ggcactatcc	gtttcagtcg	gagttcaagg	ggctcgtggt	tgcaatcccg	cagagggcat	120
ttctctctcc	gcctgcagcg	cggtcgctga	ccgtcgtcgc	agaggccaag	aaggcggttg	180
ccgtgtctca	agggaaattc	caggtcgagg	gtgttgctag	ttctctcgag	gaagacagcg	240
gtcccaaac	agtgaaagtc	cgtttgacag	gactgactcc	tgggaagcat	ggctttctac	300
tacatgagtt	tggtgacaca	accaatggct	gcataatcaac			340

<210> 1662

<211> 563

<212> DNA

<213> Pinus radiata

<400> 1662

ttcgttctgt	attcagggtt	tggggagctt	gttgtgtggt	gttctcaggg	tcaggacatt	60
gtaggcctgg	ttatacaaga	tttcgaagca	aactctcgga	gcctcgaaga	atcgccgcga	120
atttcaacgg	ccttataact	atttgggaag	cagtactctg	gattttttctc	ccggaacgga	180
tcggagtgtg	cgaagcgtaa	taatcgctcg	gaattttgtct	ttcgcaagat	aatattcaat	240
taactatttg	tcgaaggaaa	tttgagccgt	ataagaggat	aatcaaaaga	agccggttga	300
tttctccggg	attaagggat	ggatcaagaa	aactggaaaca	tcggagctga	tggcactggc	360
tgccaactcc	agaaggggcac	actctttgcg	ccaataactg	cggctttttt	ggcagttcgg	420
caacagagaaa	cctgtgttgc	gagaagtcac	ttgccgcggg	ttctccgatg	gaggaggagg	480
catctgcaat	ggccgcgctt					540
ccctctcttc	caagccagat	gtt				563

<210> 1663

<211> 572

<212> DNA

<213> Pinus radiata

<400> 1663

cagcaatggc	ggccagact	atcatcgctg	cctctatggc	atctctctca	acattatcaa	60
atggccaacta	tcggtttcag	tcgagtttca	aggggtccgt	ggttcgaatc	ccgagagagg	120
cattttctct	cgcgctctga	gcccggggcg	tgacagtcgt	cgagaggcc	aagaaggccg	180
ttgccgtgct	caaaaggaaat	tcacaggtcg	aggggtgtgt	caatctctcg	caggaagaca	240
acggtccccc	aacagtgaag	gtccgtttga	caggactgac	tctcgggagg	catggcttct	300

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atctacatga	gtttgggtgac	acaaccaatg	gctgcatctc	aacaggagca	cattttaatc	360
caaaaaaat	gacacatggt	gctcctgagg	acgatgtacg	ccatgcgggt	gacctgggaa	420
acatagttgc	gggttctgat	ggagttcgag	aggcaacaat	tggtgataat	cagattccat	480
tgagtggaac	tgatttcagtt	attggggagg	cacttggtgt	ccatgagtta	aaggatgacc	540
tggggaaagg	tgggcatgaa	cttagcctga	ca			572

<210> 1664

<211> 366

<212> DNA

<213> Pinus radiata

<400> 1664						
atcgcttcgg	cccgagcaat	tttgcttctc	tgctaaacga	tggaagagc	gccttgctgt	60
gccaacgggt	acagaagcaa	gggagcctgg	accaaggaag	aggatgacag	gcttaaccac	120
tatatccagg	ctcatggaga	aggatgctgg	cggttctctc	ccaagggcgc	agggtctgct	180
cggtgtggaa	aaagttgcag	gctgagatgg	ataaattatc	ttcgccctga	cttgaaacga	240
ggaggttttt	ctgaagatga	agacgatctt	attctcaaac	tgccgcgcct	cctcggaat	300
aagtgtgctc	tgatagcggg	tcgtttgcct	ggtcgaaact	gccacacaaa	tcaaaactac	360
tgagct						366

<210> 1665

<211> 348

<212> DNA

<213> Pinus radiata

<400> 1665						
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tggtggccagg	gagtgcccca	aggctcgcat	tttggatggt	antaggggtg	gaagatttat	120
tgacgatagg	cgtaggaagat	ttaatgacat	aactctgtagg	acatgcaacg	agccagggga	180
taccagtagg	gagtgcaact	gaattctcat	ctgccacaa	tttggtgctg	gtggacatgt	240
gcatactaa	tgccctctct	gtcgtgtgat	gctgcgggac	atgcgcaggc	attgatgctg	300
caatttctac	aacaccttga	cttttttagat	tatctgatt	tgacaaat		348

<210> 1666

<211> 422

<212> DNA

<213> Pinus radiata

<400> 1666						
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aagtagacggca	aaggcgactg	gagaagtatt	tctagaaact	ttgttggtgc	aaggacacca	120
acccaagtgtg	ccagcccatgc	tcaaaagtac	tacattcggc	ttggttcggga	taataaaaac	180
aagagaagat	ccagcataga	tgatatcacc	actgttctatg	gtacagacaga	gatgccttct	240
ccctttactgc	acgtttctaa	taggcagact	aattccccct	caacacagggc	agaaatgaat	300
cattcacccat	gtctgacata	tcactctcag	atttcacgag	gacctctaat	aaactctttg	360
ggacctcaaa	tagatggtaa	cccttctatt	tcacctcact	atcctctaaa	tctgtatacc	420
ca						422

<210> 1667

<211> 467

<212> DNA

<213> Pinus radiata

<400> 1667						
cttgttgtgt	ggtgttctgc	aggtcaggac	attgtaggcc	tggttataca	agatttggaa	60
gcaaaactctc	ggagcctcga	agaatcggcg	caaatttcaa	cggccttata	actatttggg	120
aagcagttact	ctggattttt	ctcccgggac	ggatcggagt	gtgcgaagcg	taataatcgc	180
cttgaatttg	tcttctgcga	gataatattc	aataatcta	ttgtcgaagg	aaatttgagc	240
cgtataaag	gataatcaaa	agaagccggt	tgatttctcc	gggattaaag	gatggatcaa	300
gaaaactgga	acatcggagc	tgatggcact	gggtgccaa	ctccgaagg	gcacactctt	360
tgccccaata	actgcggcct	ttttggcagt	tcggcaacga	gaaactctgt	ttcgaaatgt	420

tacagggatc tgattatgaa ggaggcccaa gctcatctg caatggc

467

<210> 1668
<211> 465
<212> DNA
<213> Pinus radiata

<400> 1668
tccagatgtt cgtggtagac atgaaatttt agagctttat ttgcaaaata agcctctggc 60
tgaagatgtg aatgtgaaag cccttgctcg tggtagacct ggtttcaatg gtgcagattt 120
tgccaaacct gtcaacattg cggccatcaa ggcagcagtt gatggcagtg agaagtgttc 180
tgccaaacct ttggaatttg cgaaggatag aataatgatg ggaacagaac ggaagtgcgt 240
gttccatca gaggagtoga aaaagctcac tgcataccat gagagtggac atgcagttgt 300
tgcatttaac actgtagggt caaaccttat acacaaggct acaatcactc ctgcagggag 360
tgcctctggg atgtgtacac agctgcctga caaggatgaa acatctgtta ataaaacgca 420
attattatga cgacttgatg tttgtatggg cggacagatt gcaga 465

<210> 1669
<211> 421
<212> DNA
<213> Pinus radiata

<400> 1669
cgaacctagg agtctaagg acaggctaata ccatctgttg ctctctgttg taatctcagc 60
aagaatggag agcgagcatt ggaagggaag gttgttatag taacggggcg ggcagcggcg 120
ataggagaag ccattgttca gctgttcgca aagcacggag cgaaagtcat aatcgagacg 180
gttcagagga aagctgggac aaagcttgca gaatcccttt ctccagatc ggcaacttat 240
gtgcactgtg atgtcagcaa agaagaagac gtgagcggcg ctgtggatct ggcatggat 300
aagtalggc aactcgacat tatgtataac aacgctggaa ctaacgagac ctttctgggt 360
aagagcgtgg cagagtatga tatggagcaa ttcgatcgag tgatgaacct aaacgtgaaa 420
g 465

<210> 1670
<211> 445
<212> DNA
<213> Pinus radiata

<400> 1670
ccatatcgaa acattcacag ggggagattg atcaaacaca aataccgtaa aatcgagcgc 60
aaaatccaaa attccacct ggggactgtg ggggaggatg gcagcaaggg ttacaaggcc 120
gtaaaatccc atcccaaaaa gggcgctgcc tcgtggctgg tggacatggt ggagaaactg 180
gtgggttgaa ctctctcgct gtatagttcg aagaagcctc tgcattttct ttgggggaac 240
ttcgctcagc tctcggaac tgcccccaaa tcgcacctgc ctgttgttgg gcaacttctc 300
agtctcttgg atggagagt cgtgcgcgtt ggtcccaatc cgaaattcgc accggtagct 360
ggctatcact ggtttgatgg agatggaaatg atccatggct tcagaattaa agatggtaaa 420
gccacatag tgtcacgtta tgtga 465

<210> 1671
<211> 460
<212> DNA
<213> Pinus radiata

<400> 1671
cagacttttg ctccgaactg ttctgctgaa acaaaatcca gtattgagct aggttttagaa 60
tcgggttttg ttggtcatctg ggagaggcga tccattcagc ttcgcaggcc ccgaagatg 120
cggttcgctg gcacaaccca gaagtgcag gcatgtgaaa agacgggtcta ttgggttgat 180
caattgcagc ctgataattc tgtttttcac aaatcctgtt tcgcctgccca tcaactgcaat 240
ggaacttttaa agcttagcaa ctattcgtcg tttgagggag ttctatattg caaacctcat 300
tttgacacgc tgttttaagag aacaggaagt ttggataaaa gtttgaagc cattcttaga 360
gcatacaaaa atgacaagag gcgatgagaat gagaacagga cacctagtag ggtatcagca 420
tgtttttcgc gtacacagga taaatgtgtt gcattgtggga 460

<210> 1672
 <211> 301
 <212> DNA
 <213> Pinus radiata

<400> 1672
 ttgttggtgg gagacggaga acattgcttt gttaaattgg tcagcggggt tgcagctgaa 60
 tccgagggtg ttgcatcctt aaaagtgttt tacctttgtg gtttggacct taggggtttga 120
 actcttttaa gaaactctca aaatcagcct taaacaataa catacaagat gtccattcta 180
 ccccaagcgt attccctcat aataaggga gtttgggcag ataactctga ggaggagtgt 240
 gctttgatc gggaaattgt ggacgattac ccttatattg ctatggatac tgagtttctc 300
 g 301

<210> 1673
 <211> 321
 <212> DNA
 <213> Pinus radiata

<400> 1673
 aacacaaata ccgtaaaatt gcagcgaata tccaaaaatt caccatgggg actgtggcgg 60
 aagatggcag caagggttac aaggccgtaa atccccatcc caaaaagggtc gtgcgctcgt 120
 ggctgggtgga catgggtgga aaactgggtg ttgaaacttc tgcggtgtat agttcgaaga 180
 agcctctgca ttttcttttg gggaaacttc ctccagttcc ggaaactgcc cccaaatcgc 240
 acctgcctgt tgttggggca cttcctagtt gcttggatgg agagttctgt gcggttggtc 300
 ccaatccgaa attcgcaccg g 321

<210> 1674
 <211> 380
 <212> DNA
 <213> Pinus radiata

<400> 1674
 cctgttcgat atcaactgct aacctatcag ttgtccatta ccttcgctg ccttgcctgt 60
 attgtcatca cagtcggcct ctgatcaaga agaagccgaa tcaggtgata attctgcata 120
 ttctgcagat gtagaacctc ttcttctca ggttgatgaa acagcttctg ctgatctgac 180
 agtgttccca ggtttttgta ccccttatgt accatacggg ttccccatgt ggacacattt 240
 tagaccacca ataaactcaa cttccaatgt ttataagcca acagctgtata tgccaactgc 300
 tccaataaaa atggacgaat gcacagggtt atccccagta agcctcggcg gtgttgcagc 360
 ggttctctga atgaaacct 380

<210> 1675
 <211> 350
 <212> DNA
 <213> Pinus radiata

<400> 1675
 cccagctgag gctctctgag accaagggtg gattcagcca gtagtaagct atagattgat 60
 agttcagaga aaagactgaa aggcacaaac tatatagaca taacaacgga gagagcagca 120
 caggaaacag gttgcataat ggctaggcct caaagatata gagaggtccg tcagaggcac 180
 tggggatcat ggggtctctga aatccgcca ccttatttga agaccagaat atggctagga 240
 acatttgaaa cagcagagga tgcagcagca gcatatgat agcctgcaag gatgatgtgt 300
 gggccagagag ctagaacca cttcccatc aatcccatgc actcccatc 350

<210> 1676
 <211> 262
 <212> DNA
 <213> Pinus radiata

<400> 1676
 aagtgcgtt catatctaac caataataac acctgtatag cttcacagca acagggcacc 60

atggggccgag	ctcttctgtgt	gataaaatgg	gagtaaaaga	aaggcccttg	gactctaacg	120
aagataaaaat	actgggtcgac	tacattacca	aacatggcca	tgggcaactgg	cgtagcactgc	180
ccaagcaagc	agggctcctg	cgatgtggaa	agaagtgtgc	gectgcgggg	gacgaattac	240
ctgaaacccg	acatcaaaag	ag				262

<210> 1677
 <211> 357
 <212> DNA
 <213> *Pinus radiata*

<400> 1677						
cgacaatggc	gcggacggga	ttcgaaacgg	cgagcgtcgg	cctcgaaact	accgagggcg	60
tcgccccggg	agctggggga	agtgggtgtc	cgagattcgc	gagcctggga	agagaaagcg	120
catatgggtt	ggatccttcc	aaacggcgaga	gatggcggtc	cgagcttaacg	acgtggctgc	180
gctcagccctg	aaggggaagt	ctgctttgcc	caatttcccg	gattccgctc	acacgctgcc	240
gcgcccctct	tctctgaatc	ccagagatat	ccagcttggc	ggctgcccag	gcagcccgga	300
attaacgcag	ccgatgggtc	ctaccgatat	ttcatcctgc	aaccgcgaaga	tcaaaat	357

<210> 1678
 <211> 354
 <212> DNA
 <213> *Pinus radiata*

<400> 1678						
cacgaggcag	tatctaccaa	tgteggggag	agacaggaag	cttgttgtgc	ttggatttcc	60
ttgggatgtc	gacactgaag	gtttacagga	ttatatgagc	aagtttgag	aactggatga	120
tggtattggt	atcgccggatc	gtgcaactgg	tcgttctcgt	ggatttgggt	atgccacatt	180
ttcttcagtt	gaagatgcta	agaaagcaat	tgacagtga	catgttctaa	atggctgtac	240
actggaagta	aaggtggcta	caccacaaga	ggagatgaag	gtccttctta	agaagattac	300
ccggatattt	gnngcaaaag	attccccctt	ctgttacaga	ggatgcattc	cgaa	354

<210> 1679
 <211> 174
 <212> DNA
 <213> *Pinus radiata*

<400> 1679						
gtccggggcg	tgagagcat	cagccttgga	gttacagacc	aggaaaaatc	aagatgggta	60
gatctccttg	ctgctccaaa	gaggggctca	accgcggggc	ctggaccaaa	aggagggata	120
tgattctctc	cgaatacgtt	cgaattcatg	gcgatgtgt	atggaaaaat	gttg	174

<210> 1680
 <211> 221
 <212> DNA
 <213> *Pinus radiata*

<400> 1680						
gttcattaag	catggagcca	aagtcataat	cgacagcgtt	gcggagaaa	ttggcaggaa	60
gcttgaggaa	tcactttctc	ccgctgtggc	aacctacgtg	cactgcgatg	tgagcaaaag	120
agaagatgtg	agcgcggcgg	tggtatgtgc	catggataag	tatggccaac	tggaacattat	180
gtatacaaac	gctggaacta	atgacagatt	tttgggtgaag	a		221

<210> 1681
 <211> 363
 <212> DNA
 <213> *Pinus radiata*

<400> 1681						
gcttaggcgc	attaaggagc	aaaggaaagg	aaaatatcac	agcgacacag	caaaacagag	60
acagtcacaa	gaacaagccc	gaaggaaaaa	gatgtcccg	gcacaggatg	gtatactgaa	120
gtacatgtgt	aaaatgatgg	aagtttgcga	agcacaaggt	tttgtatatg	gtatcatctc	180

tgaaaagg	gagcctgt	gtggagcctc	ggacaatcct	aaagcatggt	ggaaggagaa	240
ggtcagattt	gatagggaat	gacctgtctg	aatcaccaaa	tatcaagcag	aacatgcaac	300
acctggagca	aatgagagta	acatggtgtt	ggctcctacc	cctcatactc	ttcaggaact	360
tca						363

<210> 1682

<211> 374

<212> DNA

<213> Pinus radiata

<400> 1682

ctgattttgaa	gtgtctcattc	atgaacaatc	cgagcagcag	ttatgcataa	aatgttgatt	60
gcagggtctcc	gttatttcga	gcaactaaa	ggcgatggtg	ttacaatcaa	atatcgagaa	120
cgagaatgaa	ttcgaagcct	ctcggaatgc	tacaaatttg	taattttggt	cctgttagaa	180
gagcattctc	atcacclaga	gcctcagcag	atgaagaagc	tgctgcaaaa	gcagctgctg	240
ctgtagcaga	gacaggagcc	ccaaccat	ttgacaagat	cataaagaag	gaaattccag	300
caactatgt	ttatgaggat	gcaaaagt	tggtatttcg	agatattaat	ccacaggcac	360
cagtcacat	attg					374

<210> 1683

<211> 407

<212> DNA

<213> Pinus radiata

<400> 1683

gccgtggctg	ttcccaggag	aggagagcct	cagctgtctc	gatctggcct	taaggggtta	60
cagaagaaga	atttcgaaga	tggtgatgac	ttcttgcatt	tcaaaagcaag	gtcatagccg	120
tggtatttgg	accctatgg	aggatattgat	ttctctgaa	tacattcgaa	ttcatggcag	180
tgatggatgg	aaaaatatcg	ctaaacgagc	aggtaaaatt	ctaatagcga	tttttattgc	240
aaacgtaata	ctcatgtgag	ggttaactaa	gcggggcagt	tttgctctgc	aggtcttaaa	300
cgacgtggaa	agggttcgag	attacgttgg	ttgaactatc	ttgcccgcga	cattaaacgt	360
ggttaacattt	ctcctgatga	ggaggacctc	attattagg	tgcatgg		407

<210> 1684

<211> 361

<212> DNA

<213> Pinus radiata

<400> 1684

gttcagacc	ttttgcatct	tcattattct	tcgcctgtg	aaaagatggg	gagatctccg	60
tgctgtgaga	aggctcctac	taacaaagg	gcttgagcta	aacaagaaga	tgaccgcctt	120
atcgctcaca	ttcgagccca	cggcggaagg	ggctggcggt	ctcttcccaa	ggccgcagg	180
ctgctgagat	gcggcaagag	ctgcagaact	cgatggataa	actacctg	tcgccatctg	240
aaagctggaa	gcttcacgga	agaagaagac	gaactcatca	ctaaactcca	ctccttcggt	300
ggcaacaagt	ggtctttaat	tgacgggaga	ttgcccgagc	ggacgggcaa	cgagataaag	360
a						361

<210> 1685

<211> 340

<212> DNA

<213> Pinus radiata

<400> 1685

caagagttaa	cccgaaggaa	tagaaggaga	aggaggcatc	ggcagcggtg	ttcctcctcc	60
tctcctctcc	tgcatcttct	aaactcaaat	acctctctcc	tcacaatcat	ggaaggcgga	120
gtcgtctltg	aaactgtgca	aaacccactg	gatcgccgga	acactggaaa	tatggacat	180
gggtgtgccc	attacaggag	acgatgtcgg	attcgggccc	cttgttgcaa	tgagatctat	240
gattgtaggc	actgtccaaa	tgaagccatg	agccatctaa	aggacccctt	gctgcgccat	300
gagctcccaa	aatacaaaagt	tgaacgggtt	atttggtctc			340

<210> 1686

<211> 332
 <212> DNA
 <213> Pinus radiata

<400> 1686
 ggctcttccc ggagaccta gtaagccgac tactgtaaat ttattctttt agggttacag 60
 aagaagaaaa tacaagatgg cgagatctcc ttgctgtcca aaagaagggc tcaaccgtgg 120
 ggctctggacc aaaaaggagg atatgatctc ctccgaatac attcgaattc atggcgatgg 180
 cggatggaga aatatgccc aaagagcagg tcttaaacgg tgtggaaaaga gctcgagatt 240
 acgatggctg aactatcttc gccccgacat taaacgtgga aacatttccc ctgatgagga 300
 ggaactcata attcggctcc atcgccctct tg 332

<210> 1687
 <211> 347
 <212> DNA
 <213> Pinus radiata

<400> 1687
 gattgatcaa acacaaatac cgtaaaattg cagcgaataa ccaaaattcc accatgggga 60
 ctgtggcgga agatggcagc aagggttaca aggcggtaaa tccccatccc aaaaaggggc 120
 tcgcctcgtg gctgtggagg atgttgagga aactgggtgg tgaacctctc gcgttgata 180
 gttcgaagaa gccctctgat ttctttttgg ggaactctgc tccagtctcg gaaactgccc 240
 ccaaaatcgca cctgcctggt gtgtggcaac ttcctagtgt cttgatgga gagtctgtgc 300
 gccgttggtc ccaatcgcaa attcgccagg gtatgtggct atcactg 347

<210> 1688
 <211> 354
 <212> DNA
 <213> Pinus radiata

<400> 1688
 cगतगगगग ggaagattta atgacataat ctgtaggaca tgcaacgagc cagggcatac 60
 cagttagggg tgcaactggaa ttctcatctg ccacaactgt ggtggccgtg gacatgttgc 120
 atacgaatgc cctctgggtc gtgtgatgct gcggggacatg cgcaggcatt gatgtctgag 180
 tttctacacc accttgacct tttagattat ctgattttga caaatctatt ttgaatttgg 240
 aagttctttt tctgagtgt tagatcagta gacctgtcgt atcagttatt atcacagttt 300
 cttatactag tctcttactt caagactggc tgatatactt ctattttcat atga 354

<210> 1689
 <211> 348
 <212> DNA
 <213> Pinus radiata

<400> 1689
 ggagattcct ctctcgaaaa tgcgctggac cttgctcatg gttatctgag ccagattcca 60
 tcatatggct atcggggaagt tctagtcttg tattcagcac taagcaactg tgatccaggg 120
 gatattcatg aaagtataaa gaaatgcaag aattcgaaaa tgcgatgctc agtgggttga 180
 ttactctgag aaatttatat ttgcaaacac ctctgtgagg agacgggagg attctattcc 240
 gtggcacttg atgagtcaca tttcaaaggac cttctgctgt aacattgccc tccaccacca 300
 gccatagcag agtttgagct tgctagcttg gtcaagatgg gatttctc 348

<210> 1690
 <211> 349
 <212> DNA
 <213> Pinus radiata

<400> 1690
 tgcataccat cattgtaatg gaggtgaaag gaataggagt gggattctta ttaagcaatg 60
 gaagggttac ctgcgaataa cgatgcagaa cttctgagca aaaccttca agtgggaacag 120
 aagttgttct atttcgatct caaggaaaaac ccccgaggtc aataccttaa aatctctgag 180
 aagacctccg gcttcacgtc tacaataatt gtgccattg gtggagttgc atgggttctc 240

gatctctt	attattatgt	cgacggagat	gacgaggaag	ttttgagcaa	ggaattgcag	300
ctggatgcc	aggtatttta	tttcgatgtt	ggggtgaata	aaaggggtc		349

<210> 1691

<211> 339

<212> DNA

<213> Pinus radiata

<400> 1691

ctgaagtgc	ctgcattgtt	cgggaggata	gcgttttcga	agttcgttgt	tgagttatct	60
cgcgagact	tagaatttta	gggttgtttt	ccacaaaccc	acttttcccg	acttcaaatc	120
ttgatattga	agtgaactgg	ccggcgagaa	aagaaagatt	aatagaatag	ctaactgttc	180
ggccaggcag	gtcaccttcg	cgaagaggcg	gagggggctg	ttcaaaaaag	ctcaggagct	240
atcgatttta	tgcgaagccg	atgtagccct	cctcgttttt	tcttcaactg	gaaagctgta	300
ccagtaactc	agctccagca	tgaaaaatgat	attggacca			339

<210> 1692

<211> 380

<212> DNA

<213> Pinus radiata

<400> 1692

gaaacatcat	gggtcttgcc	acaaggtttg	ttgagccaca	acctgaatgg	tcatgtatttc	60
gtgaggcgag	ctttggacat	ggggaactta	gagttgccaa	tgcaacacat	gcacattgga	120
gctggcatcg	taatgatgat	gatgaagccg	ttaaatctga	tgaagtttgg	atcaataatc	180
ttagccaatc	aagagaatgt	atagaaagta	ccgactacag	tggaaagaaa	ataactaattg	240
caccttgagt	atatgctctg	agggagaaagt	gatctaaactg	taattgccaa	ggcaaaaacac	300
tgagtgtag	ctcatgcacg	gcaatgaatt	tatggttcag	tgttttagttg	tatgggaagta	360
tattattcat	tagacatgca					380

<210> 1693

<211> 442

<212> DNA

<213> Pinus radiata

<400> 1693

ggatatcatc	agctgtccag	tttgtcctaa	gagactacag	aagaagaata	tagaagatgg	60
gtagatcccc	ttgcccccca	aaagaagcgc	ttaaccgtgg	ggcttggaca	ggcatggagg	120
atagcattct	caccgagtac	attcgagttc	atggcagtg	tggttggaag	gatatctcca	180
aaagagcagg	tcttaagagg	tgtgcacaaga	gttgacagatt	gcgttggtcg	aactatcttc	240
gtcccgatag	taaacgtgg	aacattcttc	ccgaggaaga	agagctcatt	attcggttgc	300
atcgcttctc	tggaaatcgg	tggtctctga	tagcagggacg	actgcctgg	cgaacagaca	360
acgaaatcaa	gaattactgg	aacactcata	tgagcaagaa	gccatggctg	tcaattggagc	420
aatctcagtc	caatactctg	ca				442

<210> 1694

<211> 351

<212> DNA

<213> Pinus radiata

<400> 1694

tttttttttt	tttttcccta	ctccacacct	tttgttcgtc	tgccgatgg	tttgtatctg	60
atgtcaaaat	tgctctgaac	gcactgtgat	gttgattccc	atgcccgact	acaacatctg	120
cacataatag	aggttaagaa	taaaagcgaa	aataaaaagtc	ccagccatta	gcagtaaat	180
ggcagatata	ctctccgatg	attattctgt	gagggaagat	ggacaaaagc	caatcaagg	240
ctccccacat	ccaaggggct	attataagtg	cagcagcatg	agaggtgtgc	gtgcccgaa	300
acatgtggag	gggtgtccag	atgaaccttc	catgcttatt	gtgacttatg	a	351

<210> 1695

<211> 304

<212> DNA

<213> Pinus radiata

<400> 1695

caaggccgta	aatccccatc	ccaaaaagg	cgccccctcg	tggctgggtg	acatgggtgga	60
gaaactgggt	gttgaaactt	ctgcgttgta	tagttccaag	aagcctctgc	attttctttt	120
ggggaacttc	gtccagatct	cggaaactgc	ccccaaatcg	caactgacct	ttgttgggca	180
acttcctagt	tgcttggatg	gagagttcgt	gcgcgttggt	cccaatccga	aattcgcccc	240
ggttagctggc	tatcactggt	ttgatggaga	tggaatgac	catggtctca	gaattaaaga	300
tggt						304

<210> 1696

<211> 371

<212> DNA

<213> Pinus radiata

<400> 1696

gcgtgtagtg	acaacgaata	tggatccata	gaggtccctg	actttgggga	tttccctgtt	60
ccaaaagcctg	ggtagggcca	gctcttaatt	cgagtcggg	ccgctgctct	taattccctgc	120
gactttaaga	gacggaaagg	cttattaaga	aacgcggatt	ccgattttcc	gactgtgcca	180
cggtctgata	gttcaggagt	ggtgggtgaa	attggtgatg	gtgtctccaa	gttcaaggcc	240
ggtgacgaga	tatacagcaa	catccagaat	tctgcagcag	ggaggccaaa	gcagtcgggg	300
actctcgccc	agtacacagt	ggtggaggaa	ttcctggtag	cgccgaagcc	cagtaattta	360
tcatttgagg	a					371

<210> 1697

<211> 523

<212> DNA

<213> Pinus radiata

<400> 1697

ccttcattgga	tatgttggag	ttgattcgcc	accatttgct	ggaagtggag	gacaatatag	60
atatagatat	tgatattgag	ggaacttcgc	cgttgttctt	cacccccact	gccatttgaga	120
gtggcgatta	tattaatatt	gatgatcatg	acgatgatac	ccgagcgaat	gccagagcca	180
ccaggggctc	atggccaaat	atcgtcagca	gaacaacatt	aaaagagAAC	gcgaatgaat	240
ttacacaaca	gatccattct	tcatcttctc	caagatgtct	agttaatgaa	ggagcagagg	300
cggtttcaggt	aaagcaacaa	ccacgggagc	gggagaatgg	aaagaagaga	gagacaagtg	360
ccaggaaata	caagaggagt	aggcggcgcc	cgtagggaaa	attcacagca	gaatcacag	420
attccgcgcg	gaagggtgct	cgggtttggc	ttggaaactt	caacaccctc	gaagaggctg	480
ctcatgcata	tgaccgcgct	gcctacagat	tccgtggagc	tgc		523

<210> 1698

<211> 471

<212> DNA

<213> Pinus radiata

<400> 1698

cgcgatagcc	gagagcacc	ttatctcttc	cactctgttt	catacatgca	acaagctctg	60
gcagcagcaa	tgccggccca	gactatcatc	gctgcctcta	tggcatctcc	tctaacatta	120
tcaaatggcc	actatccggt	tcagtccag	ttcaagggtg	ccgtgggtcg	aatccccgag	180
agggcatttt	cttctgcgcc	tgcagcccg	gcgctgacgc	tcgtccgaga	ggccaaagaag	240
gcggttgccg	tgctcaaacg	gaattcacag	gtcgagggtg	ttgtcagtct	ctcgcaggaa	300
gacagcggtc	ccacaacagt	gaaggctccg	ttgacaggac	tgactcctgg	gaagcatggc	360
ttcatctac	atgagtttgg	tgacacaacc	aatggctgca	tatcaacagg	agcacatttt	420
aatccaaaaa	aattgacaca	tggtgctcct	gaggatgatg	tacgccatgc	g	471

<210> 1699

<211> 483

<212> DNA

<213> Pinus radiata

<400> 1699

cttctcgttg	ttgttctgt	gatttctctg	ccattctctg	tgggtttat	ggttttagct	60
tcactacaag	ccctttagcaa	gcctcacaaa	taagcttttg	agtaggatgt	ctcctcccc	120
gtcatattcc	atgtttccca	attcaggaat	gggtctaaat	ccctcagtg	catcttcaga	180
accctctagt	cagggtctcgc	gatcgatccc	ccatcaatat	tcagggtccg	aggaagagcc	240
taaaactgacg	atcgatgaaa	gaaagcagaa	gagaatgctt	tctaaccagag	aatctgcaag	300
gaggtccagg	atgagaaagc	aacagcattt	ggatgaattg	agagccgaag	cagctcatct	360
cagagcagag	aacagtcata	tgctaacaaa	attcaacatt	gcttcacaga	aatacatgca	420
gctggaagaa	gagaattctc	ttctgaggtc	ctatgccatg	gatttaagcc	tcaagctgca	480
gtc						483

<210> 1700

<211> 442

<212> DNA

<213> Pinus radiata

<400> 1700

ttttttttga	atagaaaaaa	tataattagg	tacttttctt	tagaatgttg	cagataattg	60
caattacttt	ccaaagaagc	cattgtctaa	cttttagacca	tgatartcag	ttactgcaaa	120
gaacttgaca	aacctaaaca	atcacttata	ctactgtca	ctctaaatat	taacaaatat	180
caactttcaa	tcaaagggtc	cattaagagt	tttaaccaac	aagggtgaag	caatgaatct	240
ctagatctca	ctaacctaat	tctgctctac	ctaccaagct	agcagtctgg	cttgaatat	300
gcagaaactc	caatgggtat	tacaatttac	acatgtcaca	aatgtagtca	taggttcaat	360
gtcactctct	gtttgcaact	gatagtaagt	acacttccgc	tggccacatt	taccacactt	420
gaattggctc	gttgtagctt	ta				442

<210> 1701

<211> 316

<212> DNA

<213> Pinus radiata

<400> 1701

ctaaattcat	atgctggaca	lacgtgatgt	catggcaggt	gttcttctgt	taaaaggagaa	60
aagtttggcc	aaagatatct	atttctctaca	gaatgcagaa	ggttcaggct	tggtctccatt	120
tgactgttgg	ctatgcttgc	gagggatcaa	aacaatggct	ttgcgcattg	agaaacaaca	180
ggagaatgca	aggaataattg	cagaattttt	gtcatctcat	ccctctgattg	agaaagtata	240
ttatgctggc	cttctcagcc	aaccaggcca	caatttcat	tttttcgagg	caaaaggagg	300
aggttcagtt	cttagc					316

<210> 1702

<211> 329

<212> DNA

<213> Pinus radiata

<400> 1702

ataatgtcat	attttatctc	cagagacttg	aactatttgt	atgttgtaat	tcatattggt	60
tgacatgatt	gatattgtaca	tatgtttacat	ggattatagca	tgaggatgtt	gatgtttgac	120
cttattttaa	tgttctgtagg	ttgtaaaaaa	aaaaaaaaaa	aactcogagac	tagttctctct	180
cgtgcggaat	tcggcacagag	ggaacagctg	aggaagagca	agaagaggtg	ttttgcgtgt	240
aaacaggcggg	tggggctgac	gggctttaag	tgccgctgtg	gtgacctttt	ctgcgctcag	300
cacaggtact	ctgatattgca	tgactgtctc				329

<210> 1703

<211> 325

<212> DNA

<213> Pinus radiata

<400> 1703

ctcgtgccct	ggtgcaaaaga	ttgtttataag	aggcaagggt	tctgtcaagg	aaggtagatt	60
acagcaaaaa	cgtgatctga	aacctgatcc	atccgagaaac	gaggacttgc	atgttttgggt	120
tgaggcggag	acacaggatg	ctttggaaaa	agctgcccgc	atggtggaga	anctgcttat	180
gcctgttgac	gagggtttga	atgagcacaa	gcggggcgag	ttgagagagc	ttgcggcact	240

taatggggaca atacggggatg atgaattctg caggcctttgt ggtgaaccaa gtcataaggca	300
atatgctctgc cctacaaggc ttata	325

<210> 1704
 <211> 453
 <212> DNA
 <213> Pinus radiata

<400> 1704	
cttagcgtct atagaagagc agggactaat tccatcttct tccatttcta tttctcttcc	60
caatcaaaac catggcgctc aacggacagc ttaatgcagg cactggctgt gttgggtgac	120
tgaccaatgt tggagatcga cgaattggagg ggaagggttg aatagtaaac ggcggggcag	180
cgggcataag agaagccatt gttcagttgt tcaataagca tggagccaaa gtcataatcg	240
cgcagcttgc ggagaaagct gccagaaaagc ttgagcaatc cctttcacc cgtctgggcaa	300
cttacgtgca ctgcgatgtg agcaaaagaag aggatgttaag cgcagcagtg gatgtggcca	360
tgcacaagta tgggtcaactg gacattatgt ataacaacgc tggaaactaac gacagcgttt	420
tgggtgaagag cgtagcagag tatgatattg agt	453

<210> 1705
 <211> 242
 <212> DNA
 <213> Pinus radiata

<400> 1705	
gaaaagggtca attactctgt gttgctacgg aaatctaata attcaaggtt atggatatatg	60
ccagataaga ttttctttac tccaaaagct gtcatacaac tggattttca ctgtctcgaa	120
tcaaaactgtt caccagaagc agtacttcta acttgtattt ttactgcatt atgtgtggat	180
tatttlaaatg aatacgggtga ctataagtg agtataagtc aagatgagaa ttttactgga	240
ga	242

<210> 1706
 <211> 358
 <212> DNA
 <213> Pinus radiata

<400> 1706	
gttttgggtt tctgttttta accttgggaag gttcaatttt acagtttcta cgggaattct	60
catattcaat ctgttttgga gattgaacta aagatttttg tccgggtgat ttttggatta	120
aattcaaggt cgacgaacgt gaggtgctag ggcttttaga gtttggatgg aacctatgga	180
catcgtttggc aagtcacaag atgacgtctc gcttcccaaa gcaaccatgt ttaaaattat	240
aaaagagatg ctgcctccag atgttctgtg tgcaagagat gctcaggact tactgggtga	300
gtgtgtgtg gagttttatca atctaataac ttcagaatcc aatgaagttt gtggcaga	358

<210> 1707
 <211> 334
 <212> DNA
 <213> Pinus radiata

<400> 1707	
cgtttgcttg ccgtgaaaga aatcgaactt cggcgcttg ggtgcgagaa atatttgcaa	60
atcgaacttc cggcttgggt gcaagaagct tttgcgtttt cggtttcaga ttaagacaat	120
atggagtcag aggaagacaa aatatctcca gagaacaaga aaaggagatt aaaaaccaca	180
cagcaggtcg aaggtctaga gagcttttat gctgacata agtatcttc ggaagctatg	240
aaatcacagt tatcagaaga actgggatta acagagaagc aggtacaagg atggttctgt	300
cacaggagac ttaaggataa aaggctcatg aagg	334

<210> 1708
 <211> 288
 <212> DNA
 <213> Pinus radiata

<400> 1708
 gcatcgccag cgttggtctt cctcctctcc tctcctgcat tctctcaaact caaatacctc 60
 tctctccaca atcatggaag gcggagtcgt ctttgaatct gtgcacaaac cactggatcg 120
 cctgaacact ggaaatatgg accatggttg tgcccattac aggagacgat gtcggattcg 180
 ggccctctgt tgcaatgaga tctatgattg taggcactgt cacaatgaag ccatgagcca 240
 tctaaaggac cecttgctgc gccatgagct cccaagatca aaagtga 288

<210> 1709
 <211> 406
 <212> DNA
 <213> Pinus radiata

<400> 1709
 gttcccccgtc tectcctgtc getagggcatt tctctgcat tcttcttctt ctgctcgggg 60
 tctctctggt gaaatcgctc ccgcaggagg agggctgagg gcagggtctg gtcggtctg 120
 gttcgttttcg gcaggagttt tctcagggtt tttctcttgc tttctgcgc ctcggagtc 180
 gggcttacag ttacagatc tggaaaatgg cgtcacagga gagctcaaaa atgcaagagg 240
 aagggagtcg gagacaagtg ccgggaaggg ccattcactg ttgaaacaa tgcggctctt 300
 tcgggagcgc ggccaccatg aacttggctt ccaagtgtta cagagagctt aacgccaaaa 360
 caccctctct tcttctctac ttgaaacctc agcaacctac gcttga 406

<210> 1710
 <211> 434
 <212> DNA
 <213> Pinus radiata

<400> 1710
 cctctctcat catcgggcaa ctcattatct cttctcatct ttggtggaac ctggccacaa 60
 cctagtgtac caacattgca tcttcccggt ggcagtcctc aagtgtggtc tcaagctagt 120
 cgctcccgag catcacttaa tgccagagat gtacctcttg aggaattgac cttagattcg 180
 gattgtgaag ggcaacttat aaatgatttt gcttctcttt caggatctgg aaacaccttg 240
 atgaggtctg gaaaaataca gagtcatggc tgtagtattg ctccagtlaa tcttgaggat 300
 ctatttgcct ctgagatgtc tcttagggga ccgtgccttg aacctctcgt gttttctcaa 360
 ataagttctc aaattcagtc acataaggca gctcaagttc agcctcaggt gcaaaacatca 420
 attagtaatc agat 434

<210> 1711
 <211> 387
 <212> DNA
 <213> Pinus radiata

<400> 1711
 tttactttaca caccacctgg aaatgaagat cgtcacttgc tattcgttga tgagttacgt 60
 ggtcgcttag tgaactcttc agggggacgt gctgcagagg aagtgtgata ctgaggtcgt 120
 gtttccactat gtgcacttga tgatataaa cgtgcaacag atatggcata caaagctgtc 180
 gctgaatatg gctttaacaa gtccataggt ccaatttcat tgccgacttt gttcgttggc 240
 ggtcttgatg agtctggagg agcaatgcc tgggccaagg atcagggaca tatggttagac 300
 ctgtttcaaa gagaggtgaa aattttgcta caatcggtt tgacaatggc actccttgtc 360
 atacgtctca atcccactgt acttgag 387

<210> 1712
 <211> 440
 <212> DNA
 <213> Pinus radiata

<400> 1712
 ctccttagcg tctatagaag agcaaggact aattccatct tttctcattt ctatttctct 60
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 atctgaccaa tgttgagat cgacgattgc aggggaaggt tgcaatagta accggcgggg 180
 cagcgggcat aggaagaagc attgttcaat tgttcattaa gcatggagcc aaagtcataa 240
 tcgccgagct tgcggagaaa gctggcagaa agcttgagca atcccttca cccgctgtgg 300

caacttacct	gcactgcgat	gtgagcaaa	aagaagatgt	aagcgcagca	gtggatgtgg	360
ccatcgaaaa	gtatggtcaa	ctggacatta	tgtataacaa	cgctggaact	aacgacagct	420
ttttggtgaa	gagcgtagaa					440

<210> 1713
 <211> 446
 <212> DNA
 <213> Pinus radiata

<400> 1713						
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aagaagaaaa	tacaagatgg	gcagatctcc	ttgctgtcca	aaagaagggc	tcaaccgtgg	120
ggctcgagac	aaaaggagg	atatgattct	ctccgaatac	attcgaattc	atggcgatgg	180
gggatggaga	aatatgccca	aaagagcagg	tcttaaacgg	tggtgaaaga	gctgcagatt	240
acgatggctg	aactatcttc	gccccgacat	taaacgtgga	aacatttccc	ctgatgagga	300
ggaaactcata	attcggctcc	ntccgcttct	tggtcaatcga	tggtcgctta	tagcaggaag	360
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gctgcttcca	ttgaacgaat	ctcaac				446

<210> 1714
 <211> 519
 <212> DNA
 <213> Pinus radiata

<400> 1714						
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tgaattcggt	atgcaagtag	cttgcggaag	ggcacttcta	tcatgttatt	cttattccga	120
gctactgtgt	gctatatgat	ggacctgtgt	tttcatcact	ggctcacttc	acctgtttga	180
tctcttgcca	tttttggatg	tttgtgtaag	cttggctaaa	taccagagac	acaaagaaac	240
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gaacttcatg	gacatggtgg	cagcattacc	ggctgcaaa	ttgatcgagg	tttatgatag	360
tcattttcat	tgcgaagcgg	ttctgagggt	tctgactcct	gtgccaaaga	aatatgtatt	420
gcaactatta	tatatggacg	ttgcggtgcc	tgccaaatca	ctggaggaaat	gggttctcttc	480
agatggcctg	tctaagcaca	aagcagcaat	tgatagggt			519

<210> 1715
 <211> 162
 <212> DNA
 <213> Pinus radiata

<400> 1715						
cggcccgagc	aattttgctt	ctctgctaaa	cgatgggaag	agccgcttgc	tgtgccaaag	60
gtgacagaag	caaggagacc	tggaaccaag	aagaggatga	caggcttacc	caatatattc	120
aggctcatgg	agaaggatgc	tgccgtttct	tcccgaaggc	cc		162

<210> 1716
 <211> 481
 <212> DNA
 <213> Pinus radiata

<400> 1716						
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cgccggcgaa	ggtttcggacc	ctgtgggtgg	ggatgaattga	ctgtgaagag	ccgcgatctt	180
cgatcgaaag	tgtacagaga	tcattaatgg	cgatgcagat	ccggttgctt	gtgaattgct	240
ctggctgtca	gacgccactg	cagctaccgc	cggggggcgaa	gtcgatacgc	tggtctctgt	300
gtcaagcggt	cactcatgta	gcggaaacac	acggcgatata	tccgcctcga	ggctaccgcg	360
accagcagcg	attggctcct	ccgcggtcca	gtccccagca	ctattcgccc	gctccgcctt	420
cttccccagc	caggaagaag	gcgggtcgtct	gcggcgatttc	ttacagatat	tcccagcacg	480
a						481

<210> 1717
 <211> 546
 <212> DNA
 <213> Pinus radiata

<400> 1717
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 ctgcactgtt tgcgggggata tgattccaaa aagtcgttct atggaacacc accaggatcc 120
 ccatgctcct gtatcttgtt cacagtgtgg cgaatccatt gaacgtgaat tactagtcatt 180
 ccatgagcgt gacaagtgtc ttcatagaat ttttaccatg ggttatttgc agtttccact 240
 gccagctgtt gatcttgata aacatctgaa catctgtggg aatagaacag agtattgtaa 300
 tccgtgcagc aagtattgtg gatttgttga aaagctagct catgatttac agttccatga 360
 aggaattctt gatgacactg gggattcttc aagagagcag acgggggaaa ataatacacag 420
 ctccaccaga gcgaactctg ctccgagagt tccataggaa cggccacgag ataccctcgca 480
 cgtctgttgg cttgtccatc tagcaatcac aggaattggc ataattatag gatcatttgt 540
 tcttca 546

<210> 1718
 <211> 631
 <212> DNA
 <213> Pinus radiata

<400> 1718
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 tccgaccttt ccggctaaaag ctgctgcatt tctgtgtgta ttgaagatgg ggagatctcc 120
 ctgcttgcga aaagctcata caaaacaaagg ggcgtggacc aaagaagagg acgatcgctt 180
 catcgccacc attcgaactc acggcggaagg ttgctggcgc tgccttccca agggccgagg 240
 gctgatgcgc tgcgggaaga gctgcaggct ccgatggata aactacctgc gtctctgatt 300
 gaagcgtgga aactctctca aagaagaaga cgaactcgtc atcaaaactcc actccctact 360
 cggcaacaag tggctctcta ttgcaggcag attgcccggg cggacggaca acgagataaa 420
 gaactactgt aatactcaca tcaagagaaa attgctaaac aggggactcg acccccacct 480
 ccatcgccc ctccgcccagc cgcacacacg caacaacgacc tgcctctctc tgcctccctc 540
 cgagcacgaa attcttgtgt tccagagccc aagaacgcgg gagatagcag atttctttca 600
 atacgagcgc tctgaaagct gcccgatgga a 631

<210> 1719
 <211> 561
 <212> DNA
 <213> Pinus radiata

<400> 1719
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 cctctctcca tctccagctt ccgatctgat ctatcaaaag gaagccctta aatccctcca 120
 gctttccaag cgcgggttgt gttgctgtat cccaggctcc tggctcatatg gcgggaagctg 180
 gcagcccgagg cagccaggaa agtccctggt cgggggaaca aagccccagc tccagcgtgc 240
 gggagcagga caggttccta ccatcgcca acattagccg catcatgaa agggcgctgc 300
 cggccaacgg caagatcgct aaagacgcca aggagaccgt gcaggagtgt gtcctggaat 360
 ttatcagctt catcaccagc gaggccagtg acaaatgcca gcgagaaaag aggaagacaa 420
 tcaacggcga tgaactgttc tgggccatga gcacgctagg gtttgaagat tatatcgagc 480
 ccttgaaggt ttacttgctc atglacagag agggcgagggt tgacaataag ggaatttcaa 540
 aatcggaggt agaccaatat g 561

<210> 1720
 <211> 497
 <212> DNA
 <213> Pinus radiata

<400> 1720
 ttattttgca gcatocgagag gcagcagcta cggactaatc gatccatcat agccattttt 60
 aatttcgctg cccaatcgaa ccatggagtc taagggacag gctaattccat ctgttgcctc 120
 tgtttgtaat cccagcaaga atggagagcg acgatggaa gggaaagtgt ttatagtaac 180

ggggcggggca	gcggggcatag	gagaagccat	tgttcagctg	ttcgcaaaagc	acggagcgaa	240
agtcataatc	gcagacgttg	cagagaaaagc	tggcagaaaag	cttcgagaat	ccctttctcc	300
agcatcgga	acttatgtgc	actgtgatgt	cagcaaaagaa	gaagacgtga	gcgcggctgt	360
ggatctggct	atggataagt	atggccaact	cgacattatg	tataacaacg	ctggaaactaa	420
cgacagcttt	ctgggtgaaga	gcgtggcaga	gtatgatatg	gagcaattcg	atcgagtgat	480
gaacgtaaac	gtgaaag					497

<210> 1721

<211> 394

<212> DNA

<213> Pinus radiata

<400> 1721

aataaattgg	gttcgaaagc	tttccagttg	tttgccagca	ttgaggtggc	tgagacttga	60
agaaagtgt	caacaatttg	ctgtctttat	gttgtctcaa	gtcgatcttt	ccagagaagc	120
tgcacacttg	aacgcgtttc	tttacaattt	tcgcaggtgg	aaagatgtgt	catttccctaa	180
gccttgtgac	ccacttggac	acccggcagt	tttggtggag	acttatgaac	aaggcgagag	240
tgtggcacgc	tatgttgatc	agccagaagc	aaacatagat	tttaatagat	cacttgcctca	300
cactggcagc	catactctcc	tcaagatgt	actggtggat	aatttcattc	atgcagatat	360
gcattctgga	aattattttgg	ttcgaatggg	acaa			394

<210> 1722

<211> 394

<212> DNA

<213> Pinus radiata

<400> 1722

taaggctaaag	cagaccagag	gaggtgaagg	agaaaaaaga	aacaatggct	ggaataggac	60
cgattagtca	ggattgggaa	cccgctgtca	tcagggaagaa	ggctcctaac	gctgcagcca	120
agaaggacga	gaaggctgtc	aatgctgccc	gtcgaaactgg	aggccctatt	gaaactatca	180
agaaatttaa	tgacagatca	aaacaagcag	cctcgagcag	caccaccttg	aaacccaaga	240
agccttgatga	tgagacagaa	gttctcgctc	atgaaagagt	ttcatcagat	ttgaaagaaa	300
acataatgca	agcccggtta	gataaaaagt	tgacacaagc	ccagcttgca	cagcaaatca	360
atgaaaaaac	tcagatttatt	caagagtacg	agtc			394

<210> 1723

<211> 317

<212> DNA

<213> Pinus radiata

<400> 1723

gattctctct	cttctgctcg	gggtctctct	ggtgaaatcg	tcccgcagg	aggagggtcg	60
agggcagggc	tcggctcggc	tcggctcgtt	tcggcaggag	ttatctcagg	gtttttctct	120
tgctttctcg	cgcttcggga	ctcgggctta	cagttacagc	atctggaaaa	tggcgtcaca	180
ggagagctca	aaaatgcaag	aggaaggagg	tgggagacaa	gtgcgggag	ggcccatcca	240
ctgtttgaac	aactgcggct	tcttcgggag	cgccggccacc	atgaacttgt	gtcccaagtg	300
ctacagagag	cttaacg					317

<210> 1724

<211> 265

<212> DNA

<213> Pinus radiata

<400> 1724

cggattccga	cccttcggcg	taaagctgct	gcatttctgt	gtgtattgaa	gatggggaga	60
tctccctgct	gtgaaaaagc	tcatacaaac	aaagggggct	ggaccaaaga	agaggacgat	120
cgccctcatg	ccacattcg	aactcacggc	gaaggttgct	ggcgtctcgt	tcaccaaggcc	180
gcagggctga	tcgctgcgg	gaagagctgc	aggctccgat	ggataaaacta	cctgcgtctct	240
gatctgaagc	gtggaaactt	ctcag				265

<210> 1725

<211> 284
 <212> DNA
 <213> Pinus radiata

<400> 1725
 caagagtaaa cccgaagga tagaagggga aggaggcatc ggcagcggtg ttcctcctcc 60
 tctcctctcc tgcattttct aaactcaaat acctctctcc tcacaatcat ggaagggcga 120
 gtcgtgtttg aatctgtgca aaacccactg gatcgccgta acactggaaa tatggaccat 180
 gggtgtgccc attacaggag acgatgtcgg attcggggcc ctgtgtgcaa tgagatctat 240
 gattgtaggc actgtcacia tgaaccatg agccatctaa agga 284

<210> 1726
 <211> 308
 <212> DNA
 <213> Pinus radiata

<400> 1726
 caaaccgcca agtgaagttc atatctaacc aataataaca cctgtatagc ttcacagcaa 60
 cagggcacca tggggcgagc tcttctgtgt gataaaatgg gagtaagaa agggccctgg 120
 actctagacg aagataaaat actggctcgc tacattacca aacatggcca tggcaactgg 180
 cgtgcaactg ccaagcaagc agggctcctg cgtgtgtgaa agagtgtcgc cctgcggtgg 240
 acgaattacc tgaaccgga calcaaaaaga gggaaattta gtccagaaga ggaagatcaa 300
 attattaa 308

<210> 1727
 <211> 338
 <212> DNA
 <213> Pinus radiata

<400> 1727
 gacgagcggt ttttctattaa gcatggagcc aaagtcataa tgcagacgt cgcggagaaa 60
 gctggcagga agcttgagga atcactttct cccgctgtgg caacttaagt gcaactgcgt 120
 gtgagcaaa aagaagatgt gaccgcggcg gtggatgtgg ccatggataa gtatggccaa 180
 ctggacatta tgtatacaaa cgctggaact aatgacagct ttttggtgaa gagcgtggt 240
 gagtatgata tgggcaatt cgtatcagtg atgaatgtaa acgtgaaagg agtgatgcac 300
 ggcataagc acccgcccg cggttatgat ccgcgga 338

<210> 1728
 <211> 350
 <212> DNA
 <213> Pinus radiata

<400> 1728
 gcaagaggtt ttaacatctt ttgttgatat ccagaggtt gatgatgtga aaaatgccat 60
 aacaccatct accaaggttt tgtattttga atctatctca aaccaactc tggcagttgc 120
 agacatccca tctctgtctg ccattgctca tgagaaaaat gtcaaggtgg tggttgataa 180
 taccttttct ccatgatca tatccctcgc aaagcttggt gctgatgttg ntattcacag 240
 agattcaaaa tatatcagtg gaggtgctga tgttatagca ggagcaaat gtgggctcgc 300
 agatctgata aattccatga tggatctcca tcagggaacc ttgatgctct 350

<210> 1729
 <211> 333
 <212> DNA
 <213> Pinus radiata

<400> 1729
 ccagtcatg gtttcaagtt agttagtcca ataaagcaga gatgggtcgt gctccatgct 60
 gcacaaaagt ttgtctcaac aaggggagcat ggtctgcga agaggatagt ctctctggga 120
 gatatttcca aactcatggg gaaggcaatt ggaggtctct gcccaagaaa gcagggtcgc 180
 gaagatgtgg aaagagctgc agattgcgtt ggctaaacta tctctggcca tgtatcaagc 240
 ggggaaatat tacaacagat gaagaagaac ttattatcag aatgcattct ctcttgggca 300

accgatgggc gataatagca gggagagtc ccg 333

<210> 1730
<211> 508
<212> DNA
<213> Pinus radiata

<400> 1730

ctngtgcgga	agaaatctga	atcgctcgct	tcgtggctga	caggaagcca	cagtgggagg	60
ctcgagaaac	tggttgtggt	ggtcgggagt	gtcaagattg	tgacggtggg	cggaccagcg	120
ctagtgttgt	gttggtgggc	ggcattagaa	ggggcagagg	ggccttttca	gtgcattggga	180
ttatggccaa	cgaaggcgcg	gcattcgatgc	ggctatgggg	cgacgataat	aattccatga	240
tcagggcctt	catgggggaa	ctcgattact	cttactccac	cttctggaa	ggcattcgatg	300
ccaatccctc	ttcgctaccc	tcgcccgcga	cttcccgctc	ctctcgccag	tgttgcctac	360
gccacgccct	tcaatcagga	cacgctgcag	caacgcttgc	tgggcgtttg	ggagggagcg	420
gctgagtgct	ggacttatgc	catattctgg	cagttgtcga	gcgatgccag	cggcggtcgc	480
gagctgtgct	ggggcgacgg	gtactaca				508

<210> 1731
<211> 411
<212> DNA
<213> Pinus radiata

<400> 1731

cggagtga	tcatttgcg	ccgtcactgc	tgccaagggt	tggttactgt	agattttgtt	60
atancggaca	atggcttcaa	cagacataga	tatgattccc	gtgccctctg	gcgaggggtc	120
cagctctcaa	gcgggaccaa	gcgcttccac	caagaaggcc	aaacgtttcg	aaatcaagaa	180
gtggaaatgc	gtagcccttt	gggctgggga	tattgtgggt	gataattgtg	caatttgacg	240
aaaccacatc	atggacctct	gtattgagtg	tcaggcaaat	caagcaagtg	caacaagtga	300
agaatgtact	gttgcattgg	gtgtttgcaa	tcacgccttc	catttccat	gcataagtcg	360
gtggctcaag	acacgacaag	cttgccatt	agataataag	tgagtgggag	t	411

<210> 1732
<211> 390
<212> DNA
<213> Pinus radiata

<400> 1732

cgaaactcga	atcgatatgc	tttgtggcgc	gttcaaatat	ttgagctggc	ttagcttctc	60
tggttcagca	atggcggact	aaagtaaatg	tggtcccccga	ggctctgggt	tcgaatctcg	120
ttggcgtgaa	aggtcaaat	tttctctcga	gtttcattga	ttctgaaaaa	ctggcatagc	180
tatggcgatg	agcaattggga	gattgtgtga	agatttggat	aggattaaag	ggcccggtga	240
gccccgagga	ggacgcgtcg	ctgcagaggg	ttgttcagaa	atcggggcgc	aggaactcga	300
ccctgataag	taaaagaaat	ccggggcgat	ccgggaaatc	gtgcaggcta	cggtgggtga	360
atcagctgac	cctcaggtgg	agcacagacc				390

<210> 1733
<211> 277
<212> DNA
<213> Pinus radiata

<400> 1733

atttactgga	accattgttg	gaataagtga	tgctgatcct	gtgaactggc	cgaattcaaa	60
gtggagatgc	ctcaaggatc	aatgggatga	aatatcagca	atggcacgac	cagagagatg	120
ttccccgtgg	aaattagaac	cttcattaac	tcagtgggga	gtgaatcttc	tgccagtatg	180
cagggggcag	aggcctcgcc	caaatatatt	accttcattc	tcggatttat	cagtgcattga	240
caaggcccca	gtggattcta	ctcaggtgca	caggttt			277

<210> 1734
<211> 221
<212> DNA

<213> Pinus radiata

<400> 1734

gttcaggga	agggttgccg	tgatcacagg	aggcgccagt	ggaatcggag	aggctaccgc	60
caagtgtgtc	gtggagaatg	gagcgaaagt	agtgtattga	gaccttcagg	acgacctagg	120
aaacgcgtct	gctcaatccc	tcgctcccaa	cgccgtcttt	ttccactgcg	atgtctccaa	180
agaggcgagc	gtttccgcgc	tgctggactt	ggcgctggag	a		221

<210> 1735

<211> 316

<212> DNA

<213> Pinus radiata

<400> 1735

tgggctgttc	ccaggagagg	agagcctcag	ctgtctcgat	ctggcgctaa	ggggttacag	60
aagaagaatt	tcgaagatgg	ttagatcttc	ttgctattca	aagcaaggtc	ataggcgtgg	120
gatttggacc	cctatggagg	atatgattct	ctctgaatac	nttcgaatlc	atggcattga	180
tggtggaaaa	aatatcgcta	aacgagcagg	tcttaaacga	tgtggaaaga	gttgacagatt	240
accgttggtt	gaactatctt	cgccccgaca	ttaaacgtgg	taacattttc	cctgatgagg	300
aggacctcat	tattag					316

<210> 1736

<211> 464

<212> DNA

<213> Pinus radiata

<400> 1736

cagcatcgtg	gctcttcccg	gcagacctag	taagccgact	actgtaaatt	tattctttta	60
gggtttacaga	agaagaaaaa	acaagatggg	cagatctcct	tgctgctcaa	aagaaggggt	120
caaccgtggg	gctctggacca	aaagggaggga	tatgattctc	ttcgaataca	ttcgaaatca	180
tgcgatggc	ggatggagaa	atatgcccac	aagagcaggt	cttaaacggt	gtggaaagag	240
ctgcagatta	cgatggctga	actatcttcg	ccccgcatt	aaacgtggaa	acatttcccc	300
tgatgaggag	gaactcataa	ttcggtctca	tcgctctctt	ggcaatcgat	ggtcgcttat	360
agcagggaaga	ttaccaggtc	gaacagacaa	cgaaatcaag	aactactgga	acactcatac	420
gagcaagaag	ctgcttccat	tgaacgaatc	tcaaccaaac	actt		464

<210> 1737

<211> 361

<212> DNA

<213> Pinus radiata

<400> 1737

aaggaggcat	cgccagcggt	gttctctctc	ctctctctct	ctgcatttct	caaactcaaa	60
tacctctctc	ctcacaatca	tggaggcggg	agtcgtcttt	gaatctgtgc	aaaacccact	120
ggatcgctcg	aaactctggg	atatggacca	tggttgtgcc	cattacagga	gacgatgtcg	180
gattctggcg	cttctgtgca	atgagatcta	tgattgtagg	actgtgcaca	atgaagccat	240
gagccatcta	aaggaccctc	tgctgcgcca	tgagctccca	agatacaaac	ttgaacgggt	300
tatttgtctc	ctctgtgaca	ctgagcaaaa	tgtcaagcaa	gtttgcgaaa	actgtggtgt	360
t						361

<210> 1738

<211> 371

<212> DNA

<213> Pinus radiata

<400> 1738

gcttttctgt	ttcattctgat	ttcgatttgt	tagtgaagag	catggccgaa	caggtcttgg	60
aaggagatca	gccagtggtg	ctcgagaagc	atccttcagg	catcggtccc	accctccaga	120
atatagtgtc	cactgtaaac	ttggatttga	aattggactt	gaaagccatt	gctcttcaag	180
ctcgaatgac	agagtacaat	cccaagcgtt	ttgcagcagt	cataatgaga	ataaaggagc	240
ccaaaactac	agcactgata	ttgcatcag	ggaagatggt	ttgcacaggt	gcaaaaagtg	300

aacaacagtc aaaacttgct gcaagaaagt atgctcgtat tatccaaaaa ttgggctttc 360
ctgctcattt c 371

<210> 1739

<211> 589

<212> DNA

<213> Pinus radiata

<400> 1739

gtctcagggg	aacgaaaatg	gggaagggtg	caatatggct	gcattggctca	ctggaataaa	60
cactctctcg	atccagccct	tcaaaccttc	gcctcttggc	ccccatgatg	cgaagggtcg	120
catgaagggt	gtgggtatct	gtggcagatg	cgctccactat	ttgaggacat	tacggtgtgc	180
ggactttatt	gtaaaagagc	caatgggtgat	tggtcatgag	ctgctgggaa	taattgagga	240
ggacttccagt	gaagtgaac	atctggttcc	tggtgacccg	gtagctttgg	agcctggaat	300
atcgtgttgg	cgttgcgaac	aatgtaagcg	aggctccatc	aatttgtgtc	ccgagatgaa	360
gttttttggc	acacccctcg	tgcattgggtc	cttggccaat	cagattgttc	atccgcgaa	420
tttatgtttc	aagttgccag	ataatgttaag	ttctgagaaa	ggtgcccagt	gtgaaccaat	480
cagtgttggg	gttcattgct	gtcgcctgtc	ttctgtaggc	ctgagagcaa	atgtcttggg	540
aatgggggca	ggtcctatcg	gccttgtcac	cgtgctgtct	gcacgtgca		589

<210> 1740

<211> 473

<212> DNA

<213> Pinus radiata

<400> 1740

ctttgcccgt	ttcgggttcgt	attcagggtt	tccggagcct	gttgtgtgtg	gtttctgcagg	60
tcaggacatt	gtaggccctg	ttatacaaga	tttcgaagca	aactctcggg	gcctcgaaga	120
atccggcgca	atttccacgg	ccttataact	atttgggaag	cagtagctctg	gattttttct	180
cgggaacgga	tcggagttgt	ggaaagcgtaa	taatccctcg	gaatttctct	tttcgaagat	240
aatattcaat	taattctatt	tcgaaggaaa	tttgagccgt	ataagaggat	aatcaaaaag	300
agccgggttg	ttttctcggg	attaaaggat	ggatcaagaa	aactggaaca	tcggagctga	360
tggaactggc	tgccaagctc	cagaagggca	cactctttgc	gccataaact	gcggcttttt	420
tggcagttcg	gcaacgagaa	acctgtgttc	gaaatgttac	agggatctga	tta	473

<210> 1741

<211> 546

<212> DNA

<213> Pinus radiata

<400> 1741

atccaaataa	tacaactatc	tttgtgggtg	gcttagaccc	aactgtgaca	gatgatatgc	60
tgagatcatt	atttgttcag	tttggaagac	tttgtcatgt	caaaatacca	gtgggaaaaa	120
gttgtggatt	tggtcagttt	ataacacagg	cttctgcaga	ggaagcattg	caaatgtctg	180
atggtacagt	ttctgttcag	caagccattc	gtctttcctg	gggacggagt	cctgcaaaaa	240
aacaaactgc	tggttgggtg	caaccccaac	aaccagatcc	aaatcaatgg	aattgagctt	300
attatgggtt	cggacaagga	tatgatgcag	gttatgggtt	tgacaccaca	cctcaggatc	360
ccaatatgta	cagttatgcc	ccttatgcgt	atggaataat	tcagcagcag	taacattttc	420
ttgggttcag	gctcttctgt	ggacgtggaa	atatgggttc	attcatagag	ctgtctctgt	480
aaacagttgt	tttttaacgg	catccagtc	acttatctat	attaaaatta	atgaagagga	540
aagtct						

<210> 1742

<211> 348

<212> DNA

<213> Pinus radiata

<400> 1742

agcaacctac	gcttgagcag	ccgaatgcga	agcaccatc	gattccgctt	ccctcggcgt	60
tggtgccctc	aagtagcgac	gttccaatgg	tggaaacagt	agcagcagcg	gagacggcca	120
ttggcacccg	tcacatccag	tcggcagaac	aggaggtgga	gaaacatgaa	caggacgagg	180

aggaacagct	gaggaagagc	aagaagaggt	gttttgcgtg	taacaggcgg	gtggggctga	240
cgggccttaa	gtgcgcgtgt	ggtgaccttt	tctgcgctca	gcacagggtac	tctgatattgc	300
atgactgctc	ttttgactac	aagactgcgc	gccgcctcgc	cattctca		348

<210> 1743
 <211> 300
 <212> DNA
 <213> Pinus radiata

<400> 1743	
cgaccttgct	tcaagtgcgtg
catgaaggca	ggctatattg
ttcagccanc	tttcaaaggc
nacaagtgat	cattcgggccc
ttcatacatt	tgatattgcaa
	gcctgtacaa
	tatcctgtga
	ctgttaaagg
	cattcttttg
	60
	120
	180
	240
	300

<210> 1744
 <211> 355
 <212> DNA
 <213> Pinus radiata

<400> 1744	
ggctcttccc	ggcagacctta
aagaagaaaa	tacaagatgg
ggcctggacc	aaaaggaggg
cggaaggaga	aatatgccca
acgatggctg	aactatcttc
ggaaactcata	attcggctcc
	atcgcccttc
	tactgtaaat
	ttattctttt
	agggttacag
	60
	120
	180
	240
	300
	355

<210> 1745
 <211> 294
 <212> DNA
 <213> Pinus radiata

<400> 1745	
attgcttgaa	agagatgcac
tctgtgatat	gtctaaattg
ctgaagctta	ccagaacaaa
aagtaaatatt	tcacatttgt
agaccagggg	aggctcctct
	gcaagtccat
	gtagatctca
	tctttgatat
	tctc
	60
	120
	180
	240
	294

<210> 1746
 <211> 316
 <212> DNA
 <213> Pinus radiata

<400> 1746	
aaccgcctct	tcttatacta
gacctctccg	ctctaaagctg
ctgtgaaaaa	gctcatcaaa
gcgccacatt	cgaaactcacg
gatgcgcgtc	gggaagagct
gcgtggaaac	ttctca
	cggnnccatt
	caaacttgct
	cacggattcc
	60
	120
	180
	240
	300
	316

<210> 1747
 <211> 263
 <212> DNA
 <213> Pinus radiata

<400> 1747	
gtggctgttc	ccaggagagg
	agagcctcag
	ctgtctcgat
	ctggcggttaa
	ggggttacag
	60

aagaagaatt	tcgaagatgg	ttagatcttc	ttgctattca	aagcaaggtc	ataggcgtgg	120
gatttggacc	cctatggagg	atatgattct	ctctgaatac	attcgaattc	atggcagtg	180
tggatggaaa	aatatcgcta	aacgagcagg	tcttaaacga	tgtggaaaga	gttgcgagatt	240
acgttggttg	aactatcttc	gcc				263

<210> 1748

<211> 145

<212> DNA

<213> Pinus radiata

<400> 1748

ttcggtcgga	gaattgtggg	tgggagcccc	accggaggag	tganggaaac	tcaagagatg	60
ttggactttt	gtgcagagca	taacatcagt	tgcattgattg	aaaacattgc	aatggattac	120
cgtgaacaca	gcaatcgaa	gatta				145

<210> 1749

<211> 206

<212> DNA

<213> Pinus radiata

<400> 1749

ctgggtgtgaa	tcacatcgga	gatggcattc	gcaggaaac	agcanaagtg	caaggcatgc	60
gagaagacgg	tgtacgtggg	ggatcagctc	acagccgatg	gttcagtcct	tcacaaggcc	120
tgcttcgcgt	gccatcattg	caatggcacc	ttaaagctca	gcaactatc	ttcttttgaa	180
ggggtgtgtg	actgcaaaac	tcactt				206

<210> 1750

<211> 263

<212> DNA

<213> Pinus radiata

<400> 1750

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ttgcatctgc	caagacattt	atgacggagg	caaaagtctc	tcagaacca	gtcgcgaattg	180
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<210> 1751

<211> 321

<212> DNA

<213> Pinus radiata

<400> 1751

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gaattgtacc	tgacagcaac	attacatctg	atatttcaac	accttaccat	gaccaagag	240
gagtatctga	gattctctct	cgggttgttc	atcctggagg	ccaaggtgag	gtcatgggaa	300
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<210> 1752

<211> 316

<212> DNA

<213> Pinus radiata

<400> 1752

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aggctcatgg	agaaggatgc	tggcgtttct	tcaccaaggc	cgcaggtctg	cttcggtgtg	180
gaaaaagttg	caggctgaga	tggataaatt	atcttcgccc	tgatctgaaa	cgaaggagggtt	240

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<211>	335					
<212>	DNA					
<213>	Pinus radiata					
<400>	1753					
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gaggagagg	cggcgaggga	gaaggcgagt	cgacgaagaa	tggcaatggc	aactacatta	180
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<212>	DNA					
<213>	Pinus radiata					
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ggggatcaca	tgttccctat	cggtctctgt	atttatctct	tcggtggtcg	agaccagcat	300
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<212>	DNA					
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<212>	DNA					
<213>	Pinus radiata					
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gaatcagatg	gcagttgccc	tcggtggaag	ggatggcagaa	gaagttattt	tggggaaaga	180
aaatgtcaca	acaggagcat	cgaatgactt	cccacaagta	tctcgtgttg	cccg	235
<210>	1757					
<211>	457					
<212>	DNA					
<213>	Pinus radiata					
<400>	1757					
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caactgtgaa	gccattgttt	ttagttccag	agcctgtact	tgataaaatt	tgaggagatta	360
atgtcaaggc	cactattctt	cttgctccag	aagctgctgc	tcacttgtca	caagagtcatt	420
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<210> 1758

<211> 345

<212> DNA

<213> Pinus radiata

<400> 1758

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acagatggga	agaacccctt	acgggatttg	catatgcttg	acactactac	aaatacatgg	180
gtgcaaccca	acgtaagtgg	tgaaggaccg	gcagctcgtg	aggggacacg	tgctgcactc	240
attgatccac	gtctttttat	atgtggaggt	tggtgaaagg	ttcaagatga	atctgaagag	300
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<210> 1759

<211> 544

<212> DNA

<213> Pinus radiata

<400> 1759

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acgtttatga	tccaagccaa	ggacttgctc	gtcaactctc	aactactctt	cttggaataag	180
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gtggatattc	acacagccct	acaggggcaaa	ctccatatgg	aaaacccgtg	aaagtgggtg	300
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aggtgtcaca	gtttttgtgt	ggctgcaaca	tcccagattt	catccttagg	ctcccaacaag	480
aagtgatgaa	cagcccaatg	ggccctttaa	taatgcccac	gataatgcag	tttgaaagcta	540
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<210> 1760

<211> 375

<212> DNA

<213> Pinus radiata

<400> 1760

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cgttcgcgtg	ctcaaaaggaa	atttcaaggt	cgaggggtgt	gtcaatctct	cgcaggaaga	300
caacggtccc	acaaacatga	aggtccgttt	gacaggactg	actcctggga	agcatggctt	360
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<210> 1761

<211> 333

<212> DNA

<213> Pinus radiata

<400> 1761

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gtatttcaaa	agctgaaggc	gaagtcgtga	aacaagattt	gttttgattg	caatgtctaaa	180
agtcacagtt	gggcgcgtcc	tgacatatgg	agttattcatt	tgctctgatt	gttcagcaaat	240
gcacggaggt	cttgggtgtc	atgtcagttt	tgagggttca	caaatctcga	tacatggaacc	300

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atggagcagt tgaaattgat gagctttggt ggt                                     333

<210> 1762
<211> 331
<212> DNA
<213> Pinus radiata

<400> 1762
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tgtggggccat gtgacctatgt gacctatcat tttctgacct ggatctgaga gcgagggggg 120
agttaaacgag agcccttgct ccacgaattt tgaaggcgcc gcggmcatat gcgagagcag 180
cctcttcggc ggtgatgaaa gncgcgagcc aaactctggt cctcttgccg gggctctctga 240
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tcactctgct catctctcca ctctgctctt c
331

<210> 1763
<211> 568
<212> DNA
<213> Pinus radiata

<400> 1763
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gccgtgaaga agggtaagggt ggagcgccgc cgcttcagca aggacggcag ctacctccaa 120
ctgagcgccg tcgatgggag gcgtgccact gtaaccctgc caaacgaccc ggacctgggt 180
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gtggcagggc ctgacacggc caagctggag ctccaggagg ttgtggattt ctgtaaaaaa 480
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ccggggacgg gcaagactct actgcccc
568

<210> 1764
<211> 351
<212> DNA
<213> Pinus radiata

<400> 1764
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acaatactgc agaaggagat tcccagtaca gtggtttacg aggatgagaa ggtacttgca 120
ttcagggata tcgcacccca agccactact acatcattat catccccaaa gtaaggggat 180
gcttcagctgc cctatctaa gcagaagaga ggcatgagga tatttaggtc acctgtcata 240
cactgcaaaa gttattgcga agcagggaagg tttatctgat ggcttcagaa ttgtcattaa 300
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351

<210> 1765
<211> 462
<212> DNA
<213> Pinus radiata

<400> 1765
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ctgctcaaaa gaagggtcca accgtggggc ctggacacaaa agggagagata tgatctcttc 120
cgaatacatt cgaattcatg gcgatggcgg atggagaatat atgccccaaa gagcaggtct 180
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caatcgatgg tcgcttatag caggaagatt accaggtcga acagacaacg aaatacaaga 360
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ttgctgtgcc ccaaaaagag gtgcgaatct tcttctccct gc
462

<210> 1766

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<211> 532
 <212> DNA
 <213> Pinus radiata

<400> 1766
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 tctcttgggtt caagggaaaat tacatcaaaa gggattctaa tccccgtgggt gttgtctccgg 180
 tgagcacctg cctgactgtc aaggggagcgc aagacgtcct caacaagcca ttgccttcgc 240
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<210> 1767
 <211> 354
 <212> DNA
 <213> Pinus radiata

<400> 1767
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 cgccacattt cgaactcacg gcgaagggtg ctggcgctcg ctccccaaag ccgcaaggct 240
 gatgcgtgc gggaaagagc gcaggtccgc atggataaac tactctgcgc ctgatctgaa 300
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<210> 1768
 <211> 430
 <212> DNA
 <213> Pinus radiata

<400> 1768
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 ctaacattat caaatggcca ctatccgttt cagtcagagt tcaagggtgc cgtggttcga 180
 atccgcgaga gggcattttc ctctgcgcct gcagcccggg cgctgacctg cgtcgcagag 240
 gccaaagaag ccgttgcgtg gctcaaaagg aattcacagg tcgaggggtg tgcagctctc 300
 tcgcaggaag acagcgtctc caacaacagt gcagcaggtt tgacaggact gactcctggg 360
 aagcatggct ttcatctaca tgagtttggt gacacaacca atggctgcat atcaacagga 420
 gcacatttta 430

<210> 1769
 <211> 407
 <212> DNA
 <213> Pinus radiata

<400> 1769
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 cctcttcca tctccagcgt ccgatctgat ctatcaaaag gaagccctta aatccctcca 120
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 gcagcccgcc cagccaggaa agtctctggt ccggggaaaca aagccccagc tccagcgtgc 240
 gggagcagga caggttccca cccatcgcca acattagccg catcatgaag aaggcgtgc 300
 cggccaacgg caagatcgct aaagacgcca agggagccgt gcaggaggtg gtcctcggaat 360
 ttatcagctt catcaccagc gaggccagtg acaaatgcca ccagagaa 407

<210> 1770
 <211> 347
 <212> DNA
 <213> Pinus radiata

<400> 1770
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 gcgttcgccc gcacaaccca gaagtgcgaag gcattgtgaa agacgggtcta ttgtggtgat 180
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 ggaactttaa agcttagcaa ctattcgtcg tttaggggag ttctatattg caaacctcat 300
 tttgaccagc tgtttaagag aacagggaag ttggataaaa gttttga 347

<210> 1771
 <211> 469
 <212> DNA
 <213> Pinus radiata

<400> 1771
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<210> 1772
 <211> 461
 <212> DNA
 <213> Pinus radiata

<400> 1772
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 aagactgca tgagtcggtt cattctcgcg acacattagc agcaaaacac caaagggttc 420
 tggccactcg cattagggta ggtctcaatg cctgtcatc a 461

<210> 1773
 <211> 332
 <212> DNA
 <213> Pinus radiata

<400> 1773
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 ccgctctctg gcccccactga tgcgaagggt cgcattgaagg ctgtgggtat ctgtggcagt 120
 gacgtccact atttgagac attacggttg cggaacttta ttgtaaaaaga gccaatgggt 180
 attggtcatg agtctctggtg aataattgag gaggttgga gtgaagtga acatctgggt 240
 cctgggtgacc ggttagcttt ggagcctgga atactcgtgt ggcggttgta ccaatgtaag 300
 cgaaggtcctt acaatttggtg tcccagagatg aa 332

<210> 1774
 <211> 322
 <212> DNA
 <213> Pinus radiata

<400> 1774
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 aatacttatt gacgccacta cagagggccc agtggcagac tggattttat caatctcaat 120
 ggggttttgc tgccggtgttt tcgtttatgt tgcacatcaac catcttctga tgaaggatt 180

aatacagaac	cctctgaaa	gtgtgattcg	ctttgacaaa	cccttttaca	aataatttggc	240
tgtactcact	ggagctggac	tgattgcag	ggtaatgatt	tgggacacct	agtggtaatg	300
aattgggaca	cttcttagct	gc				322

<210> 1775
 <211> 428
 <212> DNA
 <213> Pinus radiata

<400> 1775						
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cgaagcngt	ttccaaanat	ggatnngggag	aaactcatga	agatggctgg	tgcatgccgc	120
actggcgga	agggtacaa	gcgaaggaaa	aagaagacaa	ttcataagac	tgccacagga	180
gatgaaca	gacttcaaa	taccttgaaa	agaataggcg	tgaataacat	ccctgctatt	240
gaagaagtca	atatattttaa	ggatgacct	gttattcatt	ttgctaacc	aaaggtccag	300
gcttctattg	ctgcccaac	atgggtggtt	agtgggtcat	cgcaacacaa	aaaacttcaa	360
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attgcaga						428

<210> 1776
 <211> 512
 <212> DNA
 <213> Pinus radiata

<400> 1776						
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tttccatgc	agcagctgag	aggattcttc	aaacatacaa	tggtacacag	atgcctggca	480
cagagcaact	ttatagatta	aattgggctt	cc			512

<210> 1777
 <211> 498
 <212> DNA
 <213> Pinus radiata

<400> 1777						
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tggtctggga	gtggcttgcc	atgtttccag	tccgagaccg	aggagagatc	tcatccaaaa	240
gactgtagat	aaatatggct	gcataagacat	tctggtctca	aatgcagctg	ctaattccaac	300
gtgggacccc	attgtttcgg	ttccagagcc	tgtacttgat	aaactttggg	agattaacgt	360
caaggccact	attcttcttg	tccaggatgc	ttctgctcac	ttgtcacaa	agtcatacat	420
tatcataatt	tctgcaattt	ctgcttacag	gccagaggca	atgatggcca	tgtatggggt	480
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<210> 1778
 <211> 435
 <212> DNA
 <213> Pinus radiata

<400> 1778						
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agggggaag	gaacacagga	ttactgtttg	cggtttttag	aaggtcacag	aggactgtt	180
aagtcacatg	cagtgtcttt	agacactgtg	aggggatgcc	acgtctacag	cggagagcctg	240

gcatcatgaca	taaaggtttg	gcggtttagt	tcaataaaaa	gcagttccga	cgatcatgcc	300
gaggggtgcca	accataacaa	tcgcttgaaa	accatacact	cccttgagga	aagcgttttt	360
catccaaggc	aaatttttgg	tatttcatga	aactgatgta	gccatctacg	tgtcaactaa	420
ctacaatatg	cctgt					435

<210> 1779
 <211> 470
 <212> DNA
 <213> Pinus radiata

<400> 1779						
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aagctggcag	cccgggcagc	caggaaaagtc	ctcgttccgg	ggaacaaagc	cccagtcga	120
gcgtgcggga	gcaggacagc	ttcctaccaca	tcgcacaacat	tagccgcgac	atgaagaagg	180
cgctgccggc	caacggcaag	atcgctaaag	acgccaagga	gaccgtgcag	gagtggtgtc	240
cggaatttat	cagcttcac	accagcgagg	ccagtgacaa	atgccagcga	gaaaagagga	300
agacaatcaa	cggcgatgac	ttgctctggg	ccatgagcac	gctaggggtt	gaagattata	360
tcgagccctt	gaaggtttac	ttgctcatgt	acagagaggc	ggaggggtgac	aataaggggat	420
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<210> 1780
 <211> 359
 <212> DNA
 <213> Pinus radiata

<400> 1780						
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attcataaga	ctgcacacag	agatgacaag	agactttcaaa	gtaccttgaa	aagaataggc	180
gtgaataaca	ttccctgctat	tgaaagaagtc	aatattttta	aggatgacca	tgttattcat	240
tttctgaacc	caaagggtcca	ggcttctatt	ctgcgcaaca	catgggtggg	tgtggggcca	300
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<210> 1781
 <211> 360
 <212> DNA
 <213> Pinus radiata

<400> 1781						
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gtgacagaag	caaggggagc	tggaccaagg	aagaggatga	cagggttacc	caatataatc	120
aggctcatgg	agaaggatgc	tggcgtttct	tcaccaaggc	cgcaggtctg	cttcgggttg	180
gaaaaagttg	caggctgaga	tggataaaatt	atcttcgcc	tgatctgaaa	cgaggaggtt	240
tttctgaaga	tgaagacgat	cttatttcca	aactgcacgc	cttcctcgga	aataagtggt	300
ctctgatagc	gggtcggttg	cctgggtcgaa	ctgacaacga	gatcaaaaac	tactggaact	360

<210> 1782
 <211> 141
 <212> DNA
 <213> Pinus radiata

<400> 1782						
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caccaacaaa	tttcattgag	caggctgatg	aattgatccg	aaaagagctg	gtgtcattac	120
tagagcacga	caatgcaaaa	t				141

<210> 1783
 <211> 370
 <212> DNA
 <213> Pinus radiata

<400> 1783
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 tgaatccacc atccaaacag ctcaatgaaca caaccagatt agcccaagca ttgttctgat 180
 aattataatc ctgacagtta tattttttct ctctgcattg ctccacgttt taatcagata 240
 ctctggcaaga tctcccaata gagactccaa cagctcaggg gccatagggt caatcgagg 300
 gcaactgcag cagctgtttc atctccatga cgcaagggtt gaggcaggct tcattgatgc 360
 attaccagtc

<210> 1784
 <211> 381
 <212> DNA
 <213> Pinus radiata

<400> 1784
 tggttttgat ttgagtagcg ggtttataag tccgggattt ggtggttttt aaatggggct 60
 aagctattct taatttttct ctgttgggta cagcagagat ttgaagggga ttggaatttg 120
 aatcatggaa gttgagtgct gcagccctcg gtcttccgct cagggggtgt aggttgacat 180
 gaagccaacg atggtgtgtg aagatcacgt taatcaaagg cgcattgcaat atggatgttc 240
 acactaccgc cggagatgcc aaataagggc tccgtgttgt aatgaagtct ttgactgtag 300
 gcattgtcat aatgaggcca aaaattcaat ggatgtccat ccacttgaca gacatgatgt 360
 accgcgccat gaagtccgaa a

<210> 1785
 <211> 441
 <212> DNA
 <213> Pinus radiata

<400> 1785
 cacaggcagc agataatatg aggcacaaga attcgtgcc atttcgtttc tttgcttact 60
 atttctctct tcttctttta caaattggata tattctaate agtgcgctgg taatttgcag 120
 gttgcaggga agggmtgctg tgatcacagg aggtgcagat ggaatcggag aggtcaccgc 180
 caagtgtttc gtcgagaatg gagcgaaagt agngattgca gacottcagg acgacccatgg 240
 aaaccgtctt gctcaatccc tcgctcccaa cgcctgcttt tccactcgc atgtctccaa 300
 agagggcgac gtttccgcgc tgctagactt ggcgctggag aagcaggac gtcctgcact 360
 agtgttcagc aatgcgggaa tccaggcgg gtatttctcg tccattggcag acgtcactgt 420
 cgaggatttg gaaagggtca t

<210> 1786
 <211> 435
 <212> DNA
 <213> Pinus radiata

<400> 1786
 caataatgca ggaagtcctc aattagtgt caaccttgtt tttgtcttg aattgagcag 60
 gttcttgagg aactggcttc tgtccccctt ctggatatca gaccatcaat atggcgcttc 120
 tctggatcag cccctcgcca attggcccat caactcctta actaatcctg ctgactcttcg 180
 ttattctcgc ctaactcttc ccgcttctct tggcctctct gccctctgtt cccccaaccc 240
 tgcatccctc gaccagcaga gcgttcgtga gaatttgccc gccgctctcg actatgggag 300
 tctcagtgct gatcgccagg aggtgggtgt gttatttgtt tgtttcaatg agtctgtgtc 360
 gcgggattcg gtgcgcggc tagctaaatg tggccatgtt tcccatatgg agtgttttga 420
 taagtggatc gacta

<210> 1787
 <211> 323
 <212> DNA
 <213> Pinus radiata

<400> 1787
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 aaagcttgag gaatcacttt ctcccgtgtt ggcaacttac gtgcactcgc atgtgagcaa 120

agaaaaagat	gtgagcgcg	cggtggatgt	ggccatggat	aagtatggcc	aactggacat	180
tatgtataac	aacgctggaa	ctaatagcag	ctttttggtg	aagagcgctg	tagagtatga	240
tatggagcaa	ttcgatcgag	tgatgaatgt	aaacgtgaaa	ggagtgatgc	acggcattaa	300
gcacgcccgc	cgcggtgatga	tcc				323

<210> 1788

<211> 359

<212> DNA

<213> Pinus radiata

<400> 1788

cccttatctc	ctccactctg	tttcatacat	gcaacaagct	ctggcagcag	caatggcgcc	60
ccagactatc	atcgctgcct	ctatggcatc	tcctctaaca	ttatcaaatg	gccactatcc	120
gtttcagtc	gagttcaagg	ggctcgtggt	tcgaatccc	cagagggcat	tttctctcgc	180
gcctgcagcc	cgggcgctga	cagtcgctgc	agaggccaag	aaggccgttg	ccgtgctcaa	240
aggaaatcca	caggtcgagg	gtgttctcaa	tctctcgag	gaagacaaac	gtccacaaac	300
agtgaaagtc	cgtttgacag	gactgacttc	tgggaagcat	ggctttcatc	tacatgagt	359

<210> 1789

<211> 350

<212> DNA

<213> Pinus radiata

<400> 1789

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tcattggcgg	tgggtttcgt	ctgtttctgt	ctgacgatgt	tactacttca	actctacaga	120
atagtgtgga	gggagacag	tcgaggctac	aatttgccct	ccggttccag	tgggtggcca	180
ttgattggag	agaccttgag	cttcacgcga	gggatttaatt	ccatttctaa	accacgcca	240
ttcatccaag	atcgagagca	aaggtatggg	aagatattca	gaacaaatct	gtttggaaga	300
tctcgaaatga	ttgtgtctgt	ggaccacaga	ttcaacaagt	atattctgca		350

<210> 1790

<211> 337

<212> DNA

<213> Pinus radiata

<400> 1790

gatttaggta	gggtttttaag	gaagaaagac	gatccaagca	gtgggttttt	atcgagctcc	60
cacgcagttt	gaagggtgtc	gcagcagaag	aagatcggtg	tcgttcatcc	tcatacaaaa	120
agatggatcg	ggataagctt	atgaagatgg	ctgggtgagc	tcgtactggt	ggaaggggtg	180
cagtcacgag	aaagaagaaa	gcagttcaca	gagccacaac	aacagatgac	aaaaggctcc	240
aaagtacctt	gaagagggtta	ggagtgaata	ctattctctg	tattgaagaa	gtaaatattt	300
tcaangatga	gatggctcatt	cattttataa	accacaaa			337

<210> 1791

<211> 315

<212> DNA

<213> Pinus radiata

<400> 1791

gtttgccatt	gaagaccaat	aaataattat	tgtgaagcag	cagcgtttta	atcagagatc	60
cagcaagaag	aggaccagga	aaaatcattt	gcagaacaag	aagataatcc	aagatgtcaa	120
gcacacgcag	ccctcagttg	gggtgoggag	aaacttgcgc	ttgcgcogag	tgcaagtgtg	180
gagttgtgag	tattgcgcct	ccatccgacc	aaacaagtgg	gggacatgca	tattgcaagt	240
gtggagaaca	ctgcagctgc	aatccatgta	actgttcaaa	gattgacgag	actgttagtg	300
ggaaatcctt	ctgta					315

<210> 1792

<211> 376

<212> DNA

<213> Pinus radiata

<400> 1792
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 gtgcagacga gggctggttg tgcagggagt gtgatataaa agtccacaag gccacaacagc 120
 ttgccagcaa acacaagaga ttgcctcttg tcggaaactc cccaaagctc tctcgctgcg 180
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 aagactcgga tgagtccgtt cattctcgcg acacattagc agcaaaacac caaagggttcc 300
 tggccactgg cattatgggta ggttctcaat cctctgcatc agaattctcg ggtccaagcg 360
 aatttgacaa acagcc 376

<210> 1793
 <211> 407
 <212> DNA
 <213> Pinus radiata

<400> 1793
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 ggggtagtgg caatggcagt gtggtatctt ttggtacagc accaacagcc taagcagagc 120
 cacaattgtc cttgggagac tcttccaccg ggggctgtgg gatggccctt tctcggagag 180
 atcatctctt tctatttccg aacaccggat ttgtgtaagc agcggcgggg aagggtatggg 240
 aatttggttt gaacgttctt gataggatat ccaattggtaa tctcaacaga tcttgagggt 300
 aacaagttta ttctgaatga tgatggccgg ctgttcgttc ctgcattatcc gtgcgattgg 360
 tcacagataa tcggagagtg caatatcttt gctgctcgtg gagaactt 407

<210> 1794
 <211> 532
 <212> DNA
 <213> Pinus radiata

<400> 1794
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 ggtgaagggt aaggatgaagc gtattctcat tgcctcaca ccgccaatgga cattacagca 120
 cggcagatgt tcagattgat tgcgcaaccat ttgctggaag aggaagacga aatggatgtt 180
 cttgaggtag ggggaatata tccattctcc tcatcatcat ctctcattatc ctctctctccc 240
 acagttagct ccgatttttc ccacgccact gccagtggcc catgcccaac cagcgacagc 300
 acatcattat cagaagagaa tgagagtgc caaccctctt ctgctctctt tctcttggtg 360
 tccactgttt tacgaagcgc agaggcggtg aatgtaagg taatgccaca gccacagcca 420
 caggagagg acagtgcaga gaccatcaaa gacaggcact acagaggagt gaggaagcgg 480
 ccatggggta aattcgcagc tgaatcagg gaccccgcca cgaagggggg ca 532

<210> 1795
 <211> 502
 <212> DNA
 <213> Pinus radiata

<400> 1795
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 gaagggtacg ctgcgaataa cgatgcagaa ctttgagcaa aacccttcaa gtggaaacaga 120
 agtgttctta ttctgatctc aaggaaaacc ccgaggttca ataccttaaa atctctgaga 180
 agacctccgg ctacaggtct cacaataattg tgcccaattgg ttgagttgca tggttcctcg 240
 atctctttaa ttattatgtc gacggagatg acgaggaagt ttgagcgaag gaattgcagc 300
 tggatgccaa ggtattttat ttctgatgtt ggggtgataa aaggggtcgg ttcttgaaga 360
 ttctggaagc atctacatcc tacagtcgca gccacaatcat tgtacctgta ggaacacaa 420
 gaaaagatgt ttgggcagca tttagaata ttttaggaga gataaatgaa gcttccaaca 480
 agcttctggc ccatccgaac at 502

<210> 1796
 <211> 476
 <212> DNA
 <213> Pinus radiata

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<400> 1796
cgaaactcga atcgatatgc ttgtgtgcccgt gttcaaatat ttgagcnggc ttagctttctc 60
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ttggcgtgaa aggtcaaat ttctctcga gtttcatgga ttctgaaaaa ctggcatagc 180
tatggcgatg agcaatggga gatgtgtgga agatttggat aggatttaagg ggcgtggag 240
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cctgataagt aaaggaatcc cggggcgatc cgggaaatcg tgcaggctac ggtggtgcaa 360
tcagctgagc cctcaggtgag agcacagacc ttttaccctc tccgaggatg ctgctattct 420
gcgcgccac gcgcagcacg gcaacaaatg ggcaacaatt gcccgagccc tccccg 476

<210> 1797
<211> 509
<212> DNA
<213> Pinus radiata

<400> 1797
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gctgtgagaa ggctcactat aacaaagggg cctggactaa acaagaagat gccgcctta 120
tcgctcacat tcgagccccc ggcgaagggg gctggcgctt tcttcccaag gccgcaggcg 180
tgctgagatg cggcaagagc tgcagactgc gatggataaa ctactcgct cccgatctga 240
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actactggaa cacacacatc aaaaaaaat tgctgagcaa ggaactcgac cccaaacccc 420
atcgccact agcccgacca aacaataccc cgcctactcg gcctgttccc gagcacgaaa 480
tcccgcatc ccagaacctt gcaacgccc 509

<210> 1798
<211> 247
<212> DNA
<213> Pinus radiata

<400> 1798
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gttttcagtc gagttcaagg ggtccgtggg tcgaatcccg cagagggcat ttctcttcgc 120
gcctgcaagc ccgggctgct accgtcgtcg cagagggcaa gaaggccgtt ggcgtgctca 180
aagggaattc acaggtcgag ggtgtgtca gttcttcga ggaagacagc ggtcccaaaa 240
cagtgaa 247

<210> 1799
<211> 147
<212> DNA
<213> Pinus radiata

<400> 1799
tcattattct tccgctgtgt aaaagatggg agatctccgt gctgtgagaa ggctcactat 60
aacaaggggg cctggactaa acaagaagat gaccgcctta tcgctcacat tcgagccccc 120
gggaaagggg ctggcgctct cttccca 147

<210> 1800
<211> 361
<212> DNA
<213> Pinus radiata

<400> 1800
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tatccagcaa gaagaggacc aggaataatc atttgagaa caagaagata atccaagatg 120
tcaagcacac gcagccctca gctgtgggtc ggaagaaact gcgcttgccg cgattgcaa 180
agtggagttg tgagattatg gcctccatcc gaccaaaaca gtgggggaca tgcatattgc 240
aagtgtggag aacactgcaa ctgcaatcca tgtaactgtt caaagattga cgagactgtt 300
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a 361

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<210> 1801
 <211> 359
 <212> DNA
 <213> Pinus radiata

<400> 1801
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 tggatggaaa aatatcgcta aacgagcagg tcttaaacga tgtggaaga gtgcagatt 240
 acgttgggtg aactatcttc gccccgacat taaacgtggt aacattcttc ctgatgagga 300
 ggacctcatt attaggttgc atggcctctt tggcaatcga tggctcttga tagcaggac 359

<210> 1802
 <211> 475
 <212> DNA
 <213> Pinus radiata

<400> 1802
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 acaagtatgg tcaactggac attatgtata acaacgctgg aactaacgac agcgtcttgg 420
 tgaagagcgt aacagagtat gatattggagc aattcgatcg agtgataaat gtaaa 475

<210> 1803
 <211> 382
 <212> DNA
 <213> Pinus radiata

<400> 1803
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 atcagaggct atcataacca tctgttcaca tgtgtctgt aagaagtga ttgagaagac 120
 attgaaacat ctaaaagccac agtgtccatt gtgcccgaag cagcttacag catctgatct 180
 tttttagtca ccaaagggtg ctgacgagaa tgaagtaca tcagaaaaag tatgcaaaaa 240
 tggttcaaaa attaatgcat taatagctct attgaaagag tcccaggatc atgattccaa 300
 taaaaaatct gttgtatttt cacaatttcg aaaaatgctg gatctcttgc atgaaccttt 360
 gaaaagtcag gcttctagtt tg 382

<210> 1804
 <211> 533
 <212> DNA
 <213> Pinus radiata

<400> 1804
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 atcaagaaaa ctggaacatc ggagctgatg gcactggctg ccaagctcca gaaggacaca 180
 ctctttgcgc caataactgc ggcttttttg gcagttcggc aacgagaaac ctgtgttcga 240
 aatgttacag ggaatctgat atgaaggagg cccaagcctc atctgcaatg gccgcgcttg 300
 agaaagcatt tgcgcggggt tctccgatcg agggaggagg cctcttttcc aagccagatg 360
 ttttctgcga acaaaagcgt gcaccgatct cccagccggt agtccaagcc tgcctcagttc 420
 acttggctga tatagggttc tcttctcttc cacaaccttc tgccgaaaat cctaaccggt 480
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<210> 1805
 <211> 549

<212> DNA

<213> *Pinus radiata*

<400> 1805

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tcttgagggt	gaggaagctg	gtgacaaaaa	gctccaggca	catgtgaatg	aaacgtctctt	180
gaatgcagat	caagaaaatt	ccatcaaggga	gcttcacaa	aatgatctctc	gttactcgga	240
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gaatgcctct	aaagggcaaaa	ccagaggaaa	gagcgccaag	aagagagaaaa	gggatacaac	480
tttatccgta	ggtagagtgc	acaaaaacgcg	tcaaaaaat	gcttccgacg	atgtgaaggc	540
cgcttctaa						549

<210> 1806

<211> 397

<212> DNA

<213> *Pinus radiata*

<400> 1806

gttttggggt	ctcatttggg	agttacattc	aaccaagctc	atcacatggc	gtccgagaag	60
gaagctgctc	ttgctgccac	accaccagaa	gatgataaac	ctacaatat	tgacaaaaata	120
gtgcagaagg	agattcccg	tacagtgggt	tacgaggatg	agaaggtaact	tgcatctcagg	180
gatactgcac	cccaagcacc	tactcacatc	attatcatcc	ccaaagtaag	ggatggcttg	240
actggccctat	ctaaagcgag	agagaggcat	gaggatattc	taggtcacct	caaagctaca	300
gcaaaagtgta	ttgcaaaagca	ggaaggttta	tctgatggct	tcagaattgt	cattaaacgat	360
ggctctactg	gatgcccaatc	tgtgtaccat	ttacata			397

<210> 1807

<211> 242

<212> DNA

<213> *Pinus radiata*

<400> 1807

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aagggaggat	atgatctctc	ccgaatacat	tcaaatctat	ggcgatggcg	gatggagaaa	120
tatgcccaaaa	agagcaggtg	ttaaaacggg	tggaaagagc	tgcatattac	gatgggtgaa	180
ctatctctgc	cccgacatta	aacgtggaaa	catttccctc	gatgaggagg	aactcataat	240
tc						242

<210> 1808

<211> 364

<212> DNA

<213> *Pinus radiata*

<400> 1808

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gtcgtcttttg	aatctgtgca	aaacccactg	gatgcgctga	acactggaaa	tatggaccat	180
gggtgtgccc	attacaggag	acgatgtcgg	attcggggcc	cttgttgcaa	tgagatctat	240
gatntagcg	actgtcacaa	tgaagccatg	agccatctaa	aggaccctct	gctgcgcctc	300
gagctcccaa	gatacaaaagt	tgaacgggtc	atttgttctc	tctgtgacac	tgagcaaaa	360
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<210> 1809

<211> 265

<212> DNA

<213> *Pinus radiata*

<400> 1809

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aaaaatcttt	actattcatt	tgacttggga	gttgtacatt	tcttgtatat	gtccactgaa	120
actaattttt	tagatggaag	tgatcaatat	gctttccatg	agcaagattt	gaaaaagggt	180
gatagaaca	agactccatt	tgtagtattt	caaggtcacc	gtcccatgta	tacgactaac	240
tatgaactaa	aagatgcgcc	tctaa				265

<210> 1810
 <211> 346
 <212> DNA
 <213> Pinus radiata

<400> 1810						
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gtaagtccga	gtgccatggc	cgtgcacact	atgcagatgg	cgagaatgga	aatgaagcgt	180
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gtgagggaaa	ggcgtggggg	gagatttcga	gcggaaatta	gagatccctt	gaagaaaacc	300
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<210> 1811
 <211> 353
 <212> DNA
 <213> Pinus radiata

<400> 1811						
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cccccaggag	gacgcgtcgc	tgacagagct	tgttcagaaa	tacgggcccga	gggaactggac	300
cctgataagt	aaaggaatcc	cggggcgatc	cgggaatatc	tgcnagcttc	ggg	353

<210> 1812
 <211> 185
 <212> DNA
 <213> Pinus radiata

<400> 1812						
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ggagattccc	agtacatggg	tttacgagga	tgagaaggta	cttgcatcca	gggatatcgc	120
acccaacac	ctactccatc	cattatcatc	cccaaagtaa	gggatggctt	gactggccta	180
tctaa						185

<210> 1813
 <211> 337
 <212> DNA
 <213> Pinus radiata

<400> 1813						
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gctcatcata	tgccgtccga	gaaggaagct	gctcttgctg	ccacaccacc	agaagatgat	180
aaacctacaa	tatttgacaa	aatactcgag	aaggagattc	ccagtacagt	ggtttacgag	240
ctgagaagg	tacttgcat	cagggaatc	gcaccccaac	acctactcac	atcattatca	300
tccccaagg	aagggaatgc	ttgactggcc	tatctaa			337

<210> 1814
 <211> 340
 <212> DNA
 <213> Pinus radiata

<400> 1814
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 atggcgagag tgggtgtata aatgaagatc ggaggaggcg gctgcgagga agaggcgctcc 120
 tcggctgtga agggaaacga ttccagagga gtgaggaaaaa ggcgcgtggg gagattcgct 180
 gccgagatca gagatccctt gaagaaaaacc agagctctggc tgggcacttt tgacactcga 240
 gaggagggcg cccgagccta cgataaacgt gccagaaatt ccgcgggggccc aaggcgaaaaa 300
 ctaattttct tctgtctccc cacaatgaca ttagcaccaa 340

<210> 1815
 <211> 433
 <212> DNA
 <213> Pinus radiata

<400> 1815
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 ctctctgtta agatgggtgag atctccctgc tgcgacaagg ttcatacca taacaaaggc 120
 gcctggacca aagaagaaga cgagcgctctc atagcacaca ttgaagccca cgccgagggc 180
 ccatggcgtt ctcttcccaa ggcgcgaggc ctgctcgcat gtgggaagag ctgcaggttg 240
 cgatggataa actaacctgcg tctgatctg aaacgcggaa gcttttcaga atgaagaagac 300
 gatctcatca tcaaacctcca ctccctctc ggcaacaagt ggtcgcttat tgcaggggaga 360
 ttgcccaggc gaacggacaa ccgaaaataa aaaattactg gaacacgcac atgaaaaggga 420
 aattgttgag cag 433

<210> 1816
 <211> 225
 <212> DNA
 <213> Pinus radiata

<400> 1816
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 gcagatgtag aaactctctt tcttcaggtt gatgaacacg ctctctgtga tctgacagtg 120
 ttcccaggtt ttgttaacca ttatgtacca taagggttcc ccatatggga cacttttaga 180
 cccacaataa ctcaaacctc caatgtttat aagccaacag ctgta 225

<210> 1817
 <211> 337
 <212> DNA
 <213> Pinus radiata

<400> 1817
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 ggtgctgctg gggctcagatc tagtgttgat tcggagcatt cggatataga ggcgtctttt 120
 aaagaggccg aatgcagatca ggcatttgtt gaaaggaggc ctcggaacac gggcagggaag 180
 ctctgcaatg tagagaaaga acctctgaat catgtagaag ctgaaggcca gaggcgagag 240
 aagttgaacc agaggtttta cgcaatccgc gctgtgggtc ccaatgtgtc caagatggat 300
 aaggcctctc tgttgggtga tgccatttct tacatta 337

<210> 1818
 <211> 390
 <212> DNA
 <213> Pinus radiata

<400> 1818
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 gtggctcctg gggcgagggt gatagaagaa gaagaaacct accatataca catatcata 120
 ttatatacat agacacalgg gggctccgaa gcagaaatgg acttccgaag aggaggagac 180
 tctcaaaagca ggtgttgaga agtatggcac tggcaagtg ggcgaccattc agaaggaccc 240
 tgagtttgga cactgcctgc cgctcggtc caatgtggat ttgaaggata agtggcgcaa 300
 tatgagtgat agtgcctag gccaaaggtc aagggataag gtaaaagatc caagagtaaa 360
 agctattgac tctctgcctt attcatcaag 390


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<210> 1819
<211> 367
<212> DNA
<213> Pinus radiata

<400> 1819
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tgatgctgaa gtttcccta tcaatttata tgaacacgac aagatttacg agtttgcaag 180
caacaagtgc tgactagctc ttgtgaattc ttctgatcaa gttagagatc catataactga 240
tatataaaag catactttca cattgcaatt ggagcagatc tagatgcaga agtgcaacct 300
tatataacct aaaggccatc agctgcaaat caagaccatc ttcttatctt ttgagatcgt 360
gatacag                                     367

<210> 1820
<211> 487
<212> DNA
<213> Pinus radiata

<400> 1820
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ttaaagatac tatgagtgat atggatcggt catcatcaga agattcagtg gatcttcaag 180
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ctgcagagga aatagagaaa tattgtagca ggcatatata tagtgagtag taggtcacat 360
gggtttctaa tagtcaatga agaagaaggg tagaagcagc cttgcctatc taactgattt 420
aagtttggga tatatatatc gactttagtg gatggccata tcttctgggg ttataaagga 480
agtatgt                                     487

<210> 1821
<211> 319
<212> DNA
<213> Pinus radiata

<400> 1821
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gtctctctgg caagatgggg agaactccct gctgtgaaaa aggtcataca aacaaggcgg 120
cgtggaccac aaagaggagc gatcgcccca tgcctcacal tgcagccac ggcgaaggcg 180
gctggcggtc gcttcccaag gccgcagggt tgatgcgatg cgggaagagt tgcagggtcc 240
gatggataaa ctacttgctg ccagctctca gctgggaaac ttctcagaag aagaagatga 300
gtttcatcat aaactccac                                     319

<210> 1822
<211> 320
<212> DNA
<213> Pinus radiata

<400> 1822
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gtagagaatc gggggacatg atttattcat gcgccagaat ttacagattc ctcatogaat 180
tagtcattgca atgtttgtgc aggtgggtctc tgatagcagg acgactgcct ggtcgcaacg 240
acaacgaat caagaattac tggaaacactc atatgagcaa gaagccatgg ctgtcaatgg 300
acgaatctca gtccaatatt                                     320

<210> 1823
<211> 338
<212> DNA
<213> Pinus radiata

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<400> 1823
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aggccgctgg gttgcagcgg tgtggcaaaa gctgcaggct tagatggata aattatctcc      180
gtcctgacct caaacggggc aatttcagcc cagaagaaga tgagatcatt atcaaaacttc      240
attctatgtt gggtaacaa ggttctttga tcgcaagcaa attgccaggg cgaacagata      300
atgagataaa gaattactgg aacactcaca ttaagaga
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<210> 1824
<211> 332
<212> DNA
<213> Pinus radiata

<400> 1824
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cgggttgctt tgcttgccta ttctgaaaat tcgtatacac cggccgaatt gatgtcagat      120
cagttgggag atctcacaac acagcaggcg gtttctgtga aggcctccct ggccaaggca      180
tcggaacagg agcgcaaaaa gggcgtgccc tggactgaag aagagcacag actctcttg      240
atgggattga ataaatatgg caaaggtgat tggagaagca tatcaagaaa ctttgggtgc      300
tcacggacac ctactcaagt tgcaagccac gc
                                     332

<210> 1825
<211> 301
<212> DNA
<213> Pinus radiata

<400> 1825
accgtcgaga gagcttcata tctaaccaat aataacacct gtatggcttc atagcttcac      60
agcaacaggg caccatgggc cgagctcctt gctgggataa aatgggagta aagaaggcg      120
cctggactct agcagaagat aaaatactcg tcgattacat taccaaacat ggccatggca      180
actggcgcgc actgccaaag caagcaggcg tctgcgatg tggaaagagt tgcgcctgc      240
ggtagcagaa ctacctgata cccgacatca aaagagggaa ttttattcca gaagaggaat      300
a
                                     301

<210> 1826
<211> 498
<212> DNA
<213> Pinus radiata

<400> 1826
tttgcattca attcttcttg tatcatctaa ttgctcagtc tagcaattac gcaatctcgg      60
tcgccagtc tgtctgacga agaggttaat gcaactgctg cctctgtggg caatctgacc      120
ttgtctgtgc atgcatctca gcgacgattg gaaggcaagg tcgcaataat aacggggcga      180
gcattctggca taggagaagg catcgttcgg ctcttcacaa agcacggagc cagagtata      240
atcgacagca ttgcagatga aaccggcaaa attctggcgg aatcccttcc gccctcgccc      300
acttaactgc gctgcgatgt gagcaaaagc caagacgtca gcgctgcggt ggattttggcc      360
attggagaagt acgcgcagct ggaatatcatg ttaacaacg caggaaatcgt cgatacggct      420
aatgtttcaa ggggagtggc agagtacgag atggagcagc tcgaccgagt tatgagcgtc      480
aacgtcagag ggggtgatg
                                     498

<210> 1827
<211> 551
<212> DNA
<213> Pinus radiata

<400> 1827
cgtggctctt cccggcagac ctagtaagcc gactactgta aatttattct tttagggtta      60
cagaagaaga aaatacaaga tgggcagatc tcctgtctgc tcaaaagaag ggctcaaccg      120
tggggcctgg accaaaaggg aggatatgat tctctccgaa tacattcgaa ttcattggca      180
tgggcagatg agaaatatgc ccaaagaagc aggtcttaaa cgggtgtgaa agagctgcag      240
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ggagggaactc	ataattcggc	tccatcgcc	tcttggcaat	cgatggctgc	ttatagcagg	360
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gaagctgctt	ccattgaacg	aatctgaacc	caagactttg	cctgtcccca	agaggagggtc	480
gcaatctcct	tctcccctgc	aaaatcgagt	ctttaagcc	aacctgtga	aaataacaac	540
ggtggtcagt	c					551

<210> 1828

<211> 256

<212> DNA

<213> Pinus radiata

<400> 1828

ctgaaattcg	gatgcgcgaa	tcccatgaga	agatatggct	gggactctat	aataccgcgc	60
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tcaattttcc	agaaaccgtg	ccgggtattc	cgtctgcgtc	tccctttccc	cggcagcaaa	180
tacagcatgc	agccaccaga	tatgccttgg	gtgaaatccc	tttgatttgc	ccctctctgc	240
aaaatatgta	ctcgag					256

<210> 1829

<211> 372

<212> DNA

<213> Pinus radiata

<400> 1829

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ggccgcgggt	ctgggtgacga	gcaccggagg	agtatgtttg	ccggttctgt	ttgccagata	180
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cgactgcctg	ccggatcatc	catggcacca	gttcccgttc	gcgggactcg	tggccatggc	360
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<210> 1830

<211> 486

<212> DNA

<213> Pinus radiata

<400> 1830

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cactactact	gtcaacaacg	gatccgctaa	tggcccaata	ggaagtgtct	ccccaaagaa	180
taactcgata	caaaaataata	atccaggagc	tgtcaggcct	ggctggggaa	ccatgccccct	240
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<210> 1831

<211> 330

<212> DNA

<213> Pinus radiata

<400> 1831

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ggcaccggta	ggcgtatggc	ccagcaaca	acagaagaga	cgacaatgga	gacagaggag	180
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catggaaaaa	agttcgtctt	tggctcggca	cctttgacac	ggccgaggaa	gcgcgccggg	300
cttatgacac	tgcgcgtatc	tccttcagag				330

<210> 1832
 <211> 413
 <212> DNA
 <213> Pinus radiata

<400> 1832
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 aatgagcatg atgcattcagt ggataccaaa gggccctctgg aatccagcaa tgaagtctggc 180
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 aatgctcaca agcgagaacg caccttgcca aagagggggc aaagaattgg ggccttttcaa 360
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<210> 1833
 <211> 260
 <212> DNA
 <213> Pinus radiata

<400> 1833
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 ctttggaaac ccatgggtgga agaaatgtat atggaggaaac ttagagaggc cgaacacag 180
 aatcatcgag cagattcgaa ggtaacaaca gaaagtggctc aaacaatga agaaccggtg 240
 tcaaagggaag gagctgggaa 260

<210> 1834
 <211> 338
 <212> DNA
 <213> Pinus radiata

<400> 1834
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 gggctcgaac cctctgggtc ccagagctca gccatgaaa ctctcatgga gcagcctatc 180
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 gatcagggtta cccagaaaca gaaccaggtt atggctgggg acttttgata ctgcagagga 300
 agcggccatg gcttatgaca aggcctgcta caggctga 338

<210> 1835
 <211> 240
 <212> DNA
 <213> Pinus radiata

<400> 1835
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 gaaaagaata cgttccaagg attcaggaga agatgggtgaa gatagacaga gataacatcc 120
 tttcatgtt actgagcccgt gtgaacttgc aagaggggaaa aagaatgggt tagactatct 180
 ctttgatctt tatgaacagt gcgggaaatt tctgctggat gtgcaacata ttgcgaagga 240

<210> 1836
 <211> 349
 <212> DNA
 <213> Pinus radiata

<400> 1836
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 tgaaaagtgt tctacaaaga acctacgtga ccggcttcta aggatgggtga agtctctcaa 120
 ccttaaatgt gtcacagttg tagaacaaga gggttaacact aatactgcac ctttcttacc 180
 ccggtctatg gaagcattaa actattactc atcagtggtt gagtctctag atgctacaaat 240
 tccaagggat agtagagatc gtatgaatgt tgaaaaacag tgccttgccc gagacatagt 300

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<210> 1837					
<211> 457					
<212> DNA					
<213> Pinus radiata					
<400> 1837					
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<210> 1838					
<211> 395					
<212> DNA					
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<400> 1838					
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caattttagg	gaattcgact	gcgaaaaatg	ggaaggtggg	tatcggaat	ccgataacc 180
aaatctcgag	agaaaaatatg	gctgggctct	tacacgact	ccgagcaggc	tgcccgctgt 240
tacgacgccc	cagtgattatg	tctgaaaggg	cccaacgcca	aatccaactt	tccggaaaac 300
gtgacagca	ttccgtctgt	gacttctgtt	tccgctcagg	aaattcagca	cgcctccctc 360
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<400> 1839					
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gataataaat	tagcacactc	cttcaactga	caaccaaaag	ttgacctgt	tacaggggag 180
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gagggataaa	tgcttgatcc	agttcctata	acacttccca	aacctgtcat	gatgcataac 300
ttgtccataa	ctgataacta	tgcaatcttc	atggatcttc	ctctctattt	ttctccaaa 360
gatatggtaa	aagttggact	catcatgtct	tatga		395
<210> 1840					
<211> 468					
<212> DNA					
<213> Pinus radiata					
<400> 1840					
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ttctgcgtcg	ccaaatatgg	agatacgctt	ccagcaggaa	aacgaccagg	acattgctcc 120
gccacacgaa	gatcgctgt	cccgccaatt	taaaggagtc	cgaccgcgta	aatgggggat 180
atgggtatcg	gaaatccgga	tgccgagatc	tgcacagaaa	atatggctgg	gctcgtaaaa 240
aaagcccgag	caggccgccc	gcgcctacga	cgcgcgagtg	tattgtctga	gagggtcgaa 300
cgccaagtgc	aaatttcccca	attctgtgcc	cgacattccg	tctgcgtctt	ctctttcccg 360
ccagcagatt	caactcgctg	ccgccaataa	tgcggtggat	cagtcctctt	caagcccgcc 420
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<210> 1841					

<211> 378
 <212> DNA
 <213> Pinus radiata

<400> 1841
 aaacaatata gtcgacattg ttgcagcatc tagagctatt cgtgaaccac gtgtagtggg 60
 acaaaacaac agtgaaattg acatccctga tgatggatat cgtatggcga agtatgggca 120
 gaaggtgggt aaaggaatcc caaatccaag gagttactat aaatgcacaa atgctggatg 180
 tccagtggag aacatgtgtg aaagagcatc acatgatcca aaagcgggtg tcacaacata 240
 tgaaggaag cataacatcg atgtgcctgc tgccagaagc agcagccatg ataattgtgc 300
 aaaaagggaat ggagcagctc ctctagcaat gcagaataat gtcccagcgc ctatgaatgc 360
 tataccacga cctgttcc 378

<210> 1842
 <211> 382
 <212> DNA
 <213> Pinus radiata

<400> 1842
 ctcaccctc catttactc tgcgagctc attactctcc ctatcgtcga accacgtctt 60
 tctctcgcac caacaatgac tcagcagaca acctcaccaa cagttagctc cgccgacatt 120
 cgtctctcca cttctgctcc atccacatct gcaaaagtct cagctgttcc agtaccagcc 180
 caagccaaac ctgcgaaacg tctctgttgc gatctctccg cagaggagaa gcgagaggtc 240
 cgtgctcctc ggaacagaat cgcagctcag aactctcgtg acaaacgcga acgacagttc 300
 actagtctcg aacaacagat ctgcacctc gagaacgaga accgccaatt acgagacgct 360
 ctgcaccatt cgcagccgaa cc 382

<210> 1843
 <211> 314
 <212> DNA
 <213> Pinus radiata

<400> 1843
 catagaaaga gctttatgtg tctgaattt gaacctctc ctctgtttta agaatccgag 60
 ctttgcacac acgcctttgag ctgactctcg gaatacccca gcaacaatcc gacatggcta 120
 aatcctcgca aaaccagaac ccccgcaaca gcgcgaaaa cgcgttacgg aagtccaggg 180
 agttcaaggg aatacgaatg agaaaaatgg ggaatatggg gtcggaatc cgaatgcacca 240
 atttccactg gagaatttgg ctaggctctt atgacacgcc ggaatatggc gcccgcgcc 300
 acgattttgc ccgg 314

<210> 1844
 <211> 384
 <212> DNA
 <213> Pinus radiata

<400> 1844
 ccgggtccta gttcgaatcc ttgccctaac gcagtcctgt gttttaagac tcaatcttta 60
 gtgactcccc cgcaacatgg ttaagccctt gccaaaacag agcagcccgga gcggtatcgga 120
 aaactgcaca ataaagtctg gccagttcaa aggaatccga ctgagaaaaat gggggaaatg 180
 ggtgtcgga attagaatgc cgaattccag ggccaaaatc tggctgggct cctacgactc 240
 cccggaaaaa gctgcccgcg cctacgactt tgcgttgtac tgtctaagag ggtcgaaggc 300
 cacattcaat ttcccgact cccgcgga aattccatgc gcctctgacc tgtcgcgcgc 360
 gcaaatccaa gccgcgcg ccag 384

<210> 1845
 <211> 171
 <212> DNA
 <213> Pinus radiata

<400> 1845
 acatcccgct ttcactttgt tgatcaacaa ttacgacaac agcgagctct tcagcagcta 60

ggaatgatcac	agcagcagatc	ctggagaccca	caaagagggc	tccagagag	ggcggtttct	120
atttccggg	cttggctatt	tgagcatttc	cttcattcgt	acccccaaaa	t	171

<210> 1846

<211> 436

<212> DNA

<213> Pinus radiata

<400> 1846

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actgtggcgg	aagatggcag	caagggttac	acggccgtaa	atccccatcc	caaaaagggc	120
gtcgctcgt	ggctgggtgga	catgggtgag	aaactgggtg	ttgaaacttc	tcggttgtat	180
agttcgaaga	agcctctgca	ttttcttttg	gggaacttcg	ctccagcttc	ggaaactgcc	240
cccaaatcgc	acctgcattg	tggtggggcaa	cttctcagtt	gcttggaatg	agagttcgtg	300
cgcgttggtc	ccaatccgaa	attcgacacg	gtagctgggt	atcactggtt	tgatggagat	360
ggaatgatcc	atggtctgag	aattaaagat	ggtaaagcca	catatgtgtc	acgttatgtg	420
aagacatcac	gcttga					436

<210> 1847

<211> 303

<212> DNA

<213> Pinus radiata

<400> 1847

ggaggcgagc	cattctttgt	tcccegtctc	tccggtcctg	cggcgccgga	agacgatggc	60
tacatcctca	cattcatgca	caacgaggag	acctcgaagt	cggagcttct	tattttggac	120
gccagatctc	cgaccctgga	acccgtggca	acggtaaaag	tgccgtccag	agccccatc	180
ggaattccacg	gcacattcat	cattcttgaa	gagcttgcca	agcaggtgcc	gtgaagagcg	240
gctgtcttcc	gccctcttct	ctttcttgat	taccctacaa	caactgggtc	tgtactttct	300
tta						303

<210> 1848

<211> 551

<212> DNA

<213> Pinus radiata

<400> 1848

gcgatttcga	gtgctgttag	caggcaacga	cgctgtttt	gctttagagt	ttacagaaaa	60
agaagaatgt	gtggagggtc	tatcatctcg	gactttataa	tacccccctc	gagccgagggc	120
cgccgggtga	ctggccaggga	tatatggccc	gattttgata	agttctctga	gtttattaat	180
ggagggtgctg	cgggtggagtc	ctttgatgtc	agcgttgatg	tcgatgacga	cgaggaggatg	240
tcgcagcagt	acgagttctc	cgatttttgag	gagagctatc	agaacaagaa	gaagaagcag	300
caacagccga	tatccccacc	caagggtttc	gagcttctct	tagctcgggg	tcttgatgga	360
cgggcgccca	agagcgcggt	gagaaagagg	aagaatttgt	tcagagggat	caggcaacgtg	420
ccatggggga	aatgggctcg	agagatcagg	gatcccgaaa	aaggcgcctg	ggtttggcgtg	480
ggtacccttta	ataccggcga	ggaagctgct	cgggcttatg	atgcagctgc	acgaaagatc	540
agaggtaaga	a					551

<210> 1849

<211> 527

<212> DNA

<213> Pinus radiata

<400> 1849

gaacagtcga	gcctcgttgc	accctcctca	gtcaccacaa	acagcactgc	agcgaaagga	60
caaggccctg	ctgatactga	gtctcaacca	gacctaaact	ctgcgagaa	gccttcaatg	120
gagcccaaga	aaccgccaag	aaagaaaagg	cagaaacgaa	acagggagcc	cagatttgca	180
ttcatgacca	aaagtgtatg	ggatcatttg	gaagatggct	atagatggcg	caaatatggc	240
caaaaggctg	tcaaaaacag	ccctttcccc	aggagttact	atcgttgac	aaatggaaaa	300
tgctcagtga	agaaagaggt	ggagcgttcg	tcagaagatc	caggaattgt	gattacgaca	360
tatgaaggac	agcattctca	tccaagcccg	gccatattgc	gtgggtcagc	agaatcccaa	420

tccccctttt	cagatcaaa	attgaattct	cccttcactc	aaacgccatt	gatcagattc	480
cetccccacc	caatgatgat	gagtagtact	aaccagggtc	cagctgc		527

<210> 1850
 <211> 226
 <212> DNA
 <213> Pinus radiata

<400> 1850	
gagagaaagt	ggaagtacag caatagaaa tgacttgaaa agtgaaaatc ttgaagaaaa 60
agaagcgaa	gcaagtgaat atgaagataa gatgctgaaa aaaccagaca aattgttacc 120
ttgtctctgc	tgtgacagt tagataccaa attctgctat tacaataatt acaatgtgaa 180
ccagcttagg	catttctgta aaaattgcca gagatattgg actgct 226

<210> 1851
 <211> 236
 <212> DNA
 <213> Pinus radiata

<400> 1851	
atggcggag	accacgcttg ccccgctctc caagcgactt ttaactcgcc gcaacatgtc 60
gcacgacaca	tgcgctccca caccggcgac cgcccgatca agtgctccat ctgcaccgac 120
tcgtttggcc	gcagcgacct cctgaagcga catgagaaga agatgcactc aaacggggcag 180
agcgagcga	gcacgcccac tggggcaggg cagaacaaat ttgatagcca gtttac 236

<210> 1852
 <211> 455
 <212> DNA
 <213> Pinus radiata

<400> 1852	
ccacaacgaa	taaatgcaaa tgctgttctg gatagctgaa cccaccaact catcagcata 60
aatttctcca	gcagaaatcc agcctccac tcgcgcgcac aaatttcttc aacggaaatc 120
cagcggcgcc	ctaaattctc tgcaactgaca aaagcccaca ggctaacaga ttccgacatg 180
gatcgcccca	ttccctggcc atctgcatac acagaaatct agactttgaa aatctttcta 240
aattctgtat	ggagccctga actgtagggt caggggttcca ttaccgctat ggatgaggcc 300
gcgctgcaca	aggtctctct cccctgtgac tactgtggcg aagcgaatgc agttctctac 360
tgcgagctgc	actccgcaa gctctgctg ccatgtgacc accacgtcca ttctgccaat 420
gcctctgtca	agaagcatgt ccgatccac ctctg 455

<210> 1853
 <211> 324
 <212> DNA
 <213> Pinus radiata

<400> 1853	
cttgaatggt	gttgcatgtg agggatcaga aagattggaa agggccagaaa cttacaaaaa 60
gtggcaggga	cggactcagc gtgctggatt tgtacagctt cctctggatc gtagtattct 120
ctctaaatcc	agggataaagg taaaaaacat ttctatcata aggattttgg agtggacgaa 180
gagtgtaatt	ggatgctatt gggctggagg ggaagaacta ttcatgctct gtctacgtgg 240
agaccttcca	catgatttgg cgtatggaga tttttctctc tgcaaaagagt aaggcatgat 300
acatatattg	gatctcgcca aggc 324

<210> 1854
 <211> 316
 <212> DNA
 <213> Pinus radiata

<400> 1854	
acgggctctc	caacaattag gcatgattca gcagcatgct tggaggccac agagaggact 60
tcccgagcga	tctgtttctg tcttacgggc ttggctattt gaacattttc ttcatccgta 120

tccaaaagat	gcagacaaaac	atatgctcgc	gagacagact	gggcttaccac	gaaatcaggt	180
ctcaaatctg	tttataaatg	cacgtgtacg	cctctggaag	cctatggtgg	aagagatgta	240
tgtggaggaa	acaaaggagg	cagaagtaga	ccatggatca	aatgataaaa	caggttaagga	300
gagt-ggcgag	aaaaaa					316

<210> 1855

<211> 393

<212> DNA

<213> Pinus radiata

<400> 1855

cggaataatca	cccccttgcg	ttgcgcacca	tgcggcgac	gtaccgaagt	agcgagacag	60
gttcctgaat	attgtacagg	cgcgcgccca	ccccacagc	gacgacagac	acacattctt	120
taacgatcca	tctctctctt	gacgaaacct	ccacccccaa	cgattgacga	tgcccaaggc	180
ggacagccag	agcggatccc	gagattctac	ggctggcccc	gctcaaggtg	cgtggaagcg	240
gaaccagggc	tgccaccaat	gtaggaaagg	gaaactgaaa	tgcgacgcca	aaagaccttg	300
ctcgacttgt	gtgaggtcac	acaaccacgc	catcacccac	gctgggtccag	acgctgtttt	360
gcccgccttc	ccagaatgta	cctttgacga	agt			393

<210> 1856

<211> 359

<212> DNA

<213> Pinus radiata

<400> 1856

ggaaagtcca	acatagaaat	cttctgtgca	ttcatagaat	aaatatctta	caggctgcac	60
tgttaattag	gcgagaatc	gaataaaaa	tacatttgtt	tgtttacgat	ggagtggca	120
gatcgacatt	ccatctctcc	ctataagaaa	cccaagctct	ccaagaatgt	cgcttccgag	180
gctgcgcgaa	ggcagaaaa	gaacaagctt	ctctacactc	tgagggtctc	ggttcccaat	240
atttccaaga	tggaacaagg	atcgatttta	gcggacgcca	tcgaatatgt	ggagaagctg	300
aagcaacagg	tggaagagag	tgagtctgac	gttcaatcca	ccaacgtctc	ggctctatc	359

<210> 1857

<211> 459

<212> DNA

<213> Pinus radiata

<400> 1857

ggaaggcaat	gagagtgatc	tccctcaagg	aatgaagaag	gcaaggcggt	agagaggatc	60
aacagcaaa	gaaocgatta	gtaaaaatgcc	tccctgtgct	gctggaaaa	ggagtcttat	120
ctacagaggc	gtcacaaagg	atagatggac	aggacgatat	gaagctcatc	tttgggacaa	180
aagtactctg	aaccagaacc	aaaataaaaa	gggcaagcaa	gtgtacctag	gtgcctatga	240
tgaggaggag	gctgcagcca	gagcttatga	ccttgccgct	ctgaaatat	ggggctcctg	300
aactctcatc	aatcttccct	ttagtgacta	tgctagagat	attgaagaag	tgcaagagat	360
ttcaaggaaa	gatttccctg	cttctctcag	acggaaaaat	agtgggtttt	caagggggaa	420
gtcaaaatac	ccgtggactg	gccaagcaat	cacaaactg			459

<210> 1858

<211> 368

<212> DNA

<213> Pinus radiata

<400> 1858

aaaaaggcgt	cagaatgggg	tgagtctgta	gtaagtacaa	gcgaaaaacg	taatgacttg	60
gatctctcta	cttattctga	aacctcttcc	cctgctcaag	gatctgatcc	tccgggtttc	120
ccctgtaatt	tctgtcaaa	naaattctac	agttctcaag	cattaggagg	tcatcaaaat	180
gccataaagc	gtgagagaac	tttggtctaga	agggcacaga	gaatggggtc	ttttgcacaa	240
agatatattca	gcattggcatc	acttccactc	cacgggttct	cggaaacaag	ttggacgccc	300
agtcggtttt	tagggataaa	agcacattct	ttgattcaca	aaccttctcc	tgaagggtgat	360
aacctgcc						368

<210> 1859
 <211> 497
 <212> DNA
 <213> Pinus radiata

<400> 1859
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 acccgagctt tctggagcga accgtggttag taatggggggc agaccgcgac gaatccggag 120
 tccgtctcgt gcacacgcgt atggcctgcy cagaagcggt agcgcgcggt aatttggcca 180
 tccgcccggga aatgggtgaaa gaagtggaaa tctctggcttc agcacagggc ggggcaatga 240
 gcaaggtcgc cacatatttt gccgaggctc ttgcccggcg aatctatggg ttcttccctc 300
 aggacacctt gcgggttcaac cagaacgacc ccttctcgca tttctctgca ttctatttct 360
 accaaacctg cccctatctc aaattcgcgc acttcatagc caaccaggcc attctggatg 420
 ccttctccgg gcaccaacag gttcatgtca tagatttcaa tctgaaacag gggatccaat 480
 ggccggcctt gatacag 497

<210> 1860
 <211> 254
 <212> DNA
 <213> Pinus radiata

<400> 1860
 gagttaggagg cggcggcgga ggcaaggaaa gcccgtagac aggcgtcagg atgagaaaaat 60
 ggggaaaaatg ggtttctgaa gtgagggagc cgaacaagcg gtctcgcata tggctcggct 120
 cctattccac tcccaggccg gctgccaggc cctatgatac tgccgttttc tacctcagag 180
 gacctccgc gactctcaat tccccaggg aagcagctaa ggagcagcag agcgacctca 240
 ggtcttcgca gctc 254

<210> 1861
 <211> 515
 <212> DNA
 <213> Pinus radiata

<400> 1861
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 cgatacggat taacaccacg caccctatgt ctctccactc atcgtattct tctccctccc 120
 ctgacacacc atcacagctc gccgctgtgc gcccgacatc taccgagac gatctctccg 180
 tcatggaaacc tccacgtaga cgagccaggc ctgactctaa cgctgaacag cgaagagagg 240
 ccaggggccca ccgtaatcga attgccgctc aaaactctcg cgataaacgc aaggcgcaat 300
 tcacttacat ggagcagcgc gtggcacaac tggaggaaag gaaccaacga ctacgcgagc 360
 gcatggggct ctctcaattc acgccagccg acaacgacaa gttcgtcagc ctcgagagag 420
 aatcagtcaca ggcccgcgag aacagagagc tcaaggagag gatcaagagt ctagagagcg 480
 ggtggctcggc cgtcatcaaa cgtctgaggg cctca 515

<210> 1862
 <211> 532
 <212> DNA
 <213> Pinus radiata

<400> 1862
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 ctgtgattaa ttcatggcgg cggcggcgac gactacgttg ggttgtgcga aggtggattt 120
 gatacggctc atgcggctgc gagagcttac gacaggggac ctatcaagatt tccagggagt 180
 gaagctgata taaattttac tctaccgac tatcaagaag atttagacca gacgagcaag 240
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 caattctcag gaaaaagata tatatatatt ggattatttg acagtgaaga ggaggctgca 420
 agggcatatg ataaagctgc tatcaggtgc aatggaaaag aggcagtaac gaactttgat 480
 cctagcttat atgaaaaaga aattcttgaa gaaagaagag agagtcagac tt 532

<210> 1863

<211> 497
 <212> DNA
 <213> Pinus radiata

<400> 1863

ggcaccgagcn	cttctgattt	tttggccgag	ggttcgttgc	agaaaaggcca	agggcaagta	60
ggagccgata	gacctacttg	aaaatggagg	tgtctcgcaa	gaagcgaaag	gccgaagaag	120
cgaatggcgt	ggcgcgata	gcgcgtgaa	atgctcgaa	aatgctggaa	cccttcaccc	180
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gctgggatac	aaatacacag	tctctcaagg	ccctcttttc	ccagttccgg	gaactggagg	360
aaggggtcgt	cattatggac	aagaacaccc	gtaagagtaa	gggttacgga	ttcgttacct	420
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gcattgactgt	cagtcag					497

<210> 1864
 <211> 308
 <212> DNA
 <213> Pinus radiata

<400> 1864

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caccattttat	ttgacggcga	tggaaatgata	catgccgtga	cgcgcgcaca	cggaaggcct	120
agttacaggt	gccggtttac	ggagcccgaa	aaggctcatt	agcagagaaac	ggcgggggcg	180
gcagttttac	ccgaagccca	tcgggcaact	ccaacggccac	ggacgggctg	gtgcgcctgc	240
tgctgcattg	tgccccgggg	ctctgcggga	ctggtcaaca	ccgggaaggg	catgggcgtg	300
gctaatac						308

<210> 1865
 <211> 395
 <212> DNA
 <213> Pinus radiata

<400> 1865

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tttgaaggca	tatcagctgc	tcttggttgc	tactccttct	aagaaaaaat	ctcattttat	120
gactttatcaa	acgggttctta	atgtagcaga	gggagaaacg	aggttgcaca	ttgttgattt	180
cggaaattctg	tatgggtttcc	aatggccttc	tctgattcaa	tgcttgccaa	atcgtccttg	240
tggtctccct	atgcttcgca	taactgggat	cgaagttccc	caacctggat	ttagaccacg	300
agagagaatt	gaagagaact	ggcgagact	ggaagactat	gcaaaatctt	tcgggttgcc	360
ctttgaatac	caggctattg	caacaaagtg	ggaga			395

<210> 1866
 <211> 340
 <212> DNA
 <213> Pinus radiata

<400> 1866

gttaacttga	aaattgaaca	cttctcacc	agcagttctg	atatggaaaa	actggagatc	60
gaagagtttg	ggagtcccca	gggtgatgta	aaatctttgc	ttattgaatg	tgctaaagct	120
attgcagacg	gtcgtaatgc	agataatttg	attgcaggcg	tgagacaaag	tgtaaatata	180
tatggggatc	cattgcatag	gttagctgca	tatatggtag	aaggctcttg	agcaaggttg	240
catcttctcag	gaggacatat	ttacaaaacc	ctaaaatgca	aggagcctac	cagttccgaa	300
ctccttctct	acatgcatac	ttatatgaa	gtttgtccct			340

<210> 1867
 <211> 398
 <212> DNA
 <213> Pinus radiata

<400> 1867

cttttcaaga	agtggaaaag	ggtgcaaagt	ggaacccttt	ccagaagctg	gcggccgcag	60
ttcttgatgc	ggcggaggac	accctgggtc	gtccgcttga	gaagcaacgc	ccgttgccca	120
acacatccga	cccaacgggt	caactgtgcg	gcaacttcgc	gccggtgcgc	gaaacgcag	180
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gcaatggcgc	naatcccgcc	ttcaaacccc	gcggcgccca	ccatttatct	naacggcgatg	300
gaatgataca	tgccgtgacg	ctgagacacg	ggaaggctag	ttacagtttc	cggttccagg	360
agaccgaaag	gctcgttagc	gaggagcggg	cggggcggg			398

<210> 1868

<211> 200

<212> DNA

<213> Pinus radiata

<400> 1868

aattgcaaat	cttgacagtt	caatcggtta	atcaatgaaa	agcatctcag	atttatcacc	60
catgtgctaa	ttctatgagt	ggtttttgtt	tggtgttagga	gcgcactgca	ttctactctg	120
gaaaaaaaat	tggtatgcaga	gcactttcct	gtaggtttct	ttagggtggga	taagagacca	180
gcaccagttg	tagcggcagc					200

<210> 1869

<211> 286

<212> DNA

<213> Pinus radiata

<400> 1869

ggatagtgc	gagcggctga	acgtggagaa	gcactctctc	gcagagaaaa	taatggggat	60
tgtagctttt	gagggagccg	aaagaaaaat	cagactggaa	ggaagagatc	agtggcgcat	120
tgtagtgga	tcaaggggat	tcaaatctac	caatttaagt	cattatgcaa	ggagccaaag	180
tgaattctct	ctctataatt	attgtgaagc	gtattctcta	gatgaatcgt	cgggggtttct	240
ctctttggca	tgggcaaaatc	ggccctctct	caccgtctctc	agcctg		286

<210> 1870

<211> 301

<212> DNA

<213> Pinus radiata

<400> 1870

ctataccttc	gcctcttgtc	aatttcaggc	tctttctctc	tgattttttca	gacagtgtac	60
agtcgcgata	ttcacacaag	gccgccatta	tcattctatct	ttcaagaagc	agtagacca	120
acaagcaaaa	gcggaaaaac	tatgggaaag	aagaagaggn	agggccccc	ggtctgggtgt	180
tattactgtg	agcgcgagtt	cgntgatgaa	aagatattgg	ttcagcacn	gaaggccaaa	240
catttcaagt	gccatgtctg	ccacaagaag	ttgtctaccc	gctggaggca	tgggcatcca	300
t						301

<210> 1871

<211> 301

<212> DNA

<213> Pinus radiata

<400> 1871

ggctgcacca	ctgtagtaga	aacttttagcc	aagtggcagg	agctgaacag	ccaggtggaa	60
agctcaaaaag	atggcgcgaa	aagactcagg	aaagccctcg	ccaaaggggtc	aaagaaaggt	120
tcgatgaaag	gaaaggggtg	tctgtataat	ggacgttgca	actatagagg	agtcaggcag	180
agaaactggg	gaaaatgggt	tcgggaaatc	agagaaccga	atcgtggaaag	tcgactgtgg	240
ttgggtacgt	ttctctcagc	ggaggaggca	gcacgtgctt	atgatcaggc	tcgaggggtt	300
a						301

<210> 1872

<211> 447

<212> DNA

<213> Pinus radiata

<400> 1872
aagaaaccta cttggggcaa gagctcagcc catgaaactt tctgctaaaa atgattcaaa 60
actgggtatt gcaaggcctg ccaagctcta cagaggagtg agacagaggc actgggggaa 120
atgggtagca gagatcagat tacctaggaa tagaaccagg ctctggcttg gaacttttga 180
cacacagaaa gaagcagcgt ttgcatatga cacagcagcc taccaactac gtgggtgagta 240
cgcaaggctt aattttccgg acttgaggta tcttttgctc tcaaatccgg ataacggtag 300
ccataatgtt ctttcgccac cgggtaaatgc gttatctgtg ctgaaatctt ctgttgatgc 360
aaagctccag gcaattgcag agcgtttatc ccaggaaaat tcttcagaaa atcgctgat 420
ggcacacagt gccacaatg aagctct 447

<210> 1873
<211> 311
<212> DNA
<213> Pinus radiata

<400> 1873
gaagatggca gcaagggtta caaggccgta aatccccatc ccaaaaaggg cgtgcctcgc 60
tggtcgggtg acatgggtga gaaactgggt gttgaaactt ctgcgttgta tagttcgaag 120
aagctctcgc attttctttt ggggaacttc gctccagctc cggaactcgc ccccaaatgc 180
cacctgcctc ttggtgggca acttccagtg tgcttgatg gagagttcgt gcgcgttggt 240
cccaatccga aatccgcacc ggtagctggc tatcactggt ttgatggaga tggaatgatc 300
catggtctca g 311

<210> 1874
<211> 383
<212> DNA
<213> Pinus radiata

<400> 1874
ttctgccecg ttttttccct gcaactcacca cttccatcgc cattgctgga accctagaag 60
accagtctct ttctttttta actcaggagt taaatcgcaa taaaaaactc ctgtgctgga 120
ctctattgta tcattagtatt cagcaagaga ggcctatggg cggggaaaga tcgagctgaa 180
gaagatcgaa agcaacaagca acaggcaggt gacgtttctc aagcggcaga tggggttgc 240
taaaaaaggca caggagcttt ccgtcttatg cgatgcagag gtccggctca tcattttctc 300
taataccggc agactctcag acttctcgag tccagatgga gagaagatga ttgaaacata 360
ctatcgattt attgaaaaaa atg 383

<210> 1875
<211> 235
<212> DNA
<213> Pinus radiata

<400> 1875
agagattcag ggggtgtgagg aggagatcgt gggggaaatg ggtagcggag atcaggatgc 60
tcgcatgccg atcccgcgta tgggtgggat cctaccacac tgcagaaacag gcagctcgtg 120
cctatgatgc tgcctcttct tgctacagag gtccctgctgc tttctctaac ttccctgaat 180
ctccacctgc tcagtttctc ccatatcccc tgcgcctctc tcatgatatt catct 235

<210> 1876
<211> 416
<212> DNA
<213> Pinus radiata

<400> 1876
gattgtatga gatatcagaa aataaaactg atttttaattc tgcaggcatc tcagaaaaac 60
aaaactggct ttacttctac aggcactctca gaaaataaaa ctggttttac ttctgcacag 120
atgtcagaat aacaaaaactc gttttacttt tgcagacatc tcagacaata aaactggttg 180
gttttagtac tgcctcagac atctgagaaa aacaaaaacc gttttacttc tgcgcgggtg 240
aaggttttac aagcttgaat tcaaaactta taactgggag ctgtttatat gtccaaacga 300
aaatgtgagg tctacacac gctgacgcgc gagctcgtcg ccagttataa acgtaccatg 360

gaagccgtag ggcacccggg agggcagttt gacggaggcc acgacgtcga ggcccc 416

<210> 1877
<211> 320
<212> DNA
<213> *Pinus radiata*

<400> 1877
gcacaatgtt gaagggtggg atagagggtc tnatgttgat cacaaagagt ttctcagagg 60
gattggaggg tggagaatga gtatgcacaa gctctgtgat gtttgcaggg tatcaagctc 120
tgtaatatat tgcagagctc atactgcaca gctttgctta gtctgtgatg ctaaaattca 180
tgggtggtagc aaggcttcgt tgtgtcatga aagagtttgg gtttgtgaag natgtgagca 240
ggccccagct gtggttacat gcaaggcaga tgcagcagct ttatgtgtag cctgtgatac 300
tgatattcat tctgccaatc 320

<210> 1878
<211> 456
<212> DNA
<213> *Pinus radiata*

<400> 1878
ctttggattt catgggtcga tttcactgac tccgcgtga aatatcacta atttcgcttc 60
agagtttctg caatatggc aaatatggag aattttcccg agcaggaacc tgataatgcc 120
attgtctctac cacacgaaga tcgcggttcc cgccaattta agggaaatccg actgcgaaaa 180
tgggggagct gggcatctga aatccggata ccgagatcca gaaagaagat atggcttgcc 240
tcatacacta ccccggaaga ggtctcccg gcttacgacg ccgcagtgta ttgtctgaga 300
ggcgcaatg ccgaallcaa cttttctgtc cttgacattc cgactccgct ccccttttcc 360
cgtgagcaaa ttcagcatgc cgcgcgcgaa tatcggttga gccaggcccc ttgcagtttg 420
gcctcttca taggttcccc ctgcagctcg tcttcg 456

<210> 1879
<211> 491
<212> DNA
<213> *Pinus radiata*

<400> 1879
ccggagtgct tagatggagt ttacgtccgc aatggcgaga atccccggtt caaaccgccg 60
ggcgccaccc atttatttga cggcgatgga atgatalcatg ccgtgacgct gagacacggg 120
aaggctagtt acagttgccg gttcacaggag accgaaggag tcgttagcga ggagcggggc 180
ggcgaggagt tttaccgaa gcccatcggg caactccacg gccacggcgg gctgggtgcg 240
ctgctgctgc atgggtcccg ggggtctctg gggctggtca acacggggaa gggcatgggc 300
gtggctaatg ccgggctggc cttctltaac ggccgtctgc tcgctatgtc cgaagacgat 360
ctcccgatg ccgtcagggt gacgggtgac ggcgatctgg tgacagcggg caggttcgat 420
ttcagcgggc agcttccagg gtcgtcatcg gtcacggcgc accccagcat tgaccccgac 480
acggcgagc t 491

<210> 1880
<211> 310
<212> DNA
<213> *Pinus radiata*

<400> 1880
gtgagttcta ggcgatgatt tgcagtatcg caaatggcct acttacaagc tttagggaat 60
gctggcgcaa ccttagaca atttgacaga ttagaatcaa tggagcttca gaagacttca 120
cctlacccac atcttcgcca ttatcgggtc accttgcgcc ctacacctcc tctcttccc 180
ccacctccac cactctccc tccattgtct ctcacccctt ctctagtta tggatctgca 240
acttttctt ccagcatccc agtcaatcga agcatctaca gatgtccgta tcagcaatgc 300
tcaccatcat 310

<210> 1881
<211> 251

<212> DNA

<213> Pinus radiata

<400> 1881

ctggntctct	cgatctcgct	cctgttaaca	cgccccggtc	agaaatgggt	aaggaggagg	60
attgttaagt	gccccaaag	gcgggaatcg	tgaaggaaat	tcaagcctgg	actatgccca	120
agccctgcaa	cgtgtgcagg	atcgcgagcg	cttcgctcta	ttgcagggcc	gacgctgctt	180
atctctgctc	cggtcgcgac	gtcaaaagttc	acggcgccaa	caagctggcg	tcgcgccacg	240
agaggggtgtg	g					251

<210> 1882

<211> 351

<212> DNA

<213> Pinus radiata

<400> 1882

cacgagggcc	agagctgtgtg	ctgttcccag	aagaggatat	catcagctgt	ccagtttgtc	60
ctaagagact	acagaagaag	aatatagaag	atgggttagat	ccccttgcgc	cccaaaagaa	120
gcgcttaacc	gtggggcttg	gacaggcatg	gaggatacga	ttctcaccga	gtacattcga	180
gttcatggca	gtgggtggctg	gaaagctatc	tccaaaagag	cagggtgagt	tcaataaaaa	240
tttaaatgca	attcttttta	ttagcagaag	gaagtagcaa	ttccccaggt	tatatataac	300
aattcatcag	tcatatatat	cagaaattta	tagtcgagtc	taagagggag	a	351

<210> 1883

<211> 450

<212> DNA

<213> Pinus radiata

<400> 1883

tcccttatca	cagaaataga	actgatggct	agtcagattc	cagaatgaac	cctctaaatt	60
aaatgtagcc	gccttagaac	attagaagaa	gcaaaagcaa	acattcatga	tcaataaatg	120
tagattaaaa	ccacgggcat	tgaatgttag	tagaagttag	atattggtcag	gcaactctgt	180
tcctgtgtgt	gtgggtgggt	tcaagttcgt	agagcttttc	tcggccagaa	aaaacgatga	240
gcgcacccct	tgactcgac	agcaetgaaa	gctcgaaggc	ttctctcatc	agaccgcctc	300
ggcgcttcca	gaaggtcacc	tgcttgcgca	cgctattctc	gatcttcttg	gtttctattt	360
taccgcgccc	cattttcagc	aaaatcccaa	aatctgagta	tgggcaggcg	ttgaacttaa	420
atttgcctca	tgaacagaa	taccgagctt				450

<210> 1884

<211> 386

<212> DNA

<213> Pinus radiata

<400> 1884

aaatgatcag	aggcggttct	ccagttattc	acaacaaaga	aaaggtcccg	cgcttcgggc	60
ttctgcccac	atatgcttct	gacgagagtg	agctgaaatg	gatcgaggtc	ccgattgtct	120
ctctgtttca	tctctggaac	gcctgggaag	aaggagaaga	cgaggttgtc	gtcatcggct	180
cctgatgac	cccgccgaac	gccattttca	acgaattctga	cagcgcgctg	cggaattgtc	240
tgtcggaatc	tcggctcaat	ctcaaaacgc	gcttgtccac	cagacgcgag	atcacgcgca	300
tgaatctcga	gagtacttct	agagcgcgcc	cgggcccctc	gattttccac	ccgggtgggg	360
taccaggtaa	gtgtatccaa	ttcgcc				386

<210> 1885

<211> 190

<212> DNA

<213> Pinus radiata

<400> 1885

aaatgatcag	aggcggttct	ccagttattc	acaacaaaga	aaaggtcccg	cgcttcgggc	60
ttctgcccac	atatgcttct	gacgagagtg	agctgaaatg	gatcgaggtc	ccgattgtct	120
tctgttttca	tctctggaac	gcctgggaag	aaggagaaga	cgaggttgtc	gtcatcggct	180

cctgtatgac	190
<210> 1886	
<211> 412	
<212> DNA	
<213> Pinus radiata	
<400> 1886	
ggtccacagc gccttcnngg gcgttcgtgc cgcaagatat gcttcctgac agagtgaagct	60
gaaatgntc gaggtcccg atgtcgtctg cnttcctctc tggaaacgct ggggaagaagg	120
agaagacgag gttgtcgtca tcggctcctg tatgaccccg ccggacgcga ttttcaacga	180
atctgacagc gcgctcgga gtgttcctgc ggaatttcg ctcaatctca aaaccggctt	240
gtccaccaga cgcgagatca cgcgatgaa tctcgagagt acttctagag cggccgcggg	300
cccatcgatt ttccaccccg gtgggtgacc aggttaagtgt acccaattcg cccatatacgt	360
gagtcgctatt acaattcacc tggccgtcgt tttaaacacc ncntgactgg ga	412
<210> 1887	
<211> 329	
<212> DNA	
<213> Pinus radiata	
<400> 1887	
atcagaagcg ggtctccag ttattcacaa caaagaaaag gtcccgcgct tcgggcttct	60
gcccaaatat gcttcctgac agagtgaagc gaaatggatc gaggtcccg attgcttctg	120
ctttctcttc tggaaagcct gggagaagg agaagacgag gttgtcgtca tcggctcctg	180
tatgaccccg ccggacgcga ttttcaacga atctgacagc gcgctcgga gtgttcctgc	240
ggaaatttcg ctcaatctca aaaccggctt gtccaccaga cgcgagatca cgcgatgaa	300
tctcgagagt acttctagaa gcggccggc	329
<210> 1888	
<211> 101	
<212> DNA	
<213> Pinus radiata	
<400> 1888	
aaatgatcag aggcggttct ccagttatc acaacaaga aaaggtcccg cgcttcgggc	60
ttctgcccga atatgcttct gacgagagt agctgaaatg g	101
<210> 1889	
<211> 326	
<212> DNA	
<213> Pinus radiata	
<400> 1889	
atgatcagag gcggttctcc agttattcac aacaagaaa aggtcccgcg ctctcggtctt	60
ctgcccaaat atgcttctna cgagagtga ctgaaatgga tcgaggtccc ggattgcttc	120
tgctttctat tctggaacgc ctgggaagaa ggagaagac aggttctcgt catcggtctc	180
tgtatgacc cgctggacgc cattttcaac gaatctgaca gcgcgctcg gagtgttctg	240
tgggaattc ggctcaatct caaaaccgcg ttgtccacca gacgcgagat cacgccgatg	300
aatctcgaga gtacttctag agcggt	326
<210> 1890	
<211> 246	
<212> DNA	
<213> Pinus radiata	
<400> 1890	
agctgaaatg gatcgacgtc ccggattgct tctgttttca tctctggaa cgcctgggaag	60
aaggagaaga cgaggttctg gtcacgtcgt cctgtatgac ccgcgcggac gccattttca	120
acgaattctga cagcgcgctg cggagtgttc tgtcggaat tgctctcaat ctcaaaaaccg	180
gcttgtccac cagacgcgag atcacgccga tgaatctcga gagtacttct agagcggccg	240

cggggc

246

<210> 1891
 <211> 238
 <212> DNA
 <213> Pinus radiata

<400> 1891
 aatgatcag aggcggttct ccagttattc acaacaaga aaaggtcccg cgcttcgggc 60
 ttctcgccaa atagtcttct gacgagagt agctgaaatg gatcgaggtc ccggattgct 120
 tctgctttca tctctgggac gcctgggaag aaggagaaga cgaggttgtc gtcatcggtc 180
 cctgtatgac cccgcgggac gccattttca acgaatctga cagcgcgctg cggagtggt 238

<210> 1892
 <211> 349
 <212> DNA
 <213> Pinus radiata

<400> 1892
 tgtaccggaa aattccaaac aaataatcaa ccatggactc atattgccgg agatgggctc 60
 agtggacagc gggcgcgag gacgagagc aattttgtcc gatgatgtg tgaaattcca 120
 atgcccgaat tgttgtatgg ttttcccgac gtctcaggct ctgcggcgcc accagaacgc 180
 ccataaaaga gaacggcgcc gggaatgac gagggtttcag agatcgccct gtgacagttc 240
 aaactattca ggaacaacaga atagtattga tctgttttag cgtgagagag ttcccgggctc 300
 ttctctcctt tcaccacagc gtacgagga tcatgttgtt tgcagtgac 349

<210> 1893
 <211> 417
 <212> DNA
 <213> Pinus radiata

<400> 1893
 gaagaagaag aagaagaag ccccggtggt tcagggcgaa tgagccgtag cgcctcagaa 60
 tgggccttcc agaagtttct cagttttgat ggttccaaaga ttcctcaga agatggagaa 120
 ggcgaacaga agcctctcgg tgtttaaagat cctctgcttc acggtcatat ggacaacgctc 180
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 cctcgagatt acgagccctt cctcaagcgg aggccttaacc ttgacctgcg gccagtcgac 300
 ttactcggg ttacaggaat tagctctcca ggcctcggtc cctcaacagt ggatgcaaac 360
 caatctcaga acacttttag atcagaaga gtgcacgtt ggtatcccaa tcttccg 417

<210> 1894
 <211> 456
 <212> DNA
 <213> Pinus radiata

<400> 1894
 ggaaggcaat gagagtgtac tcttcaagg aatgaagaag gcaaggcgtg agagaggatc 60
 aacagcaaa gaacggatta gtaaaatgcc tccctgtgct gctggaanaa ggagttctat 120
 ctacagagcg gtcaacaagg atagatggac aggcagatag gaagctcatc ttgtgggcaa 180
 aagtactctg aaccagaacc aaaaataaaa gggcaagcaa gtgtacctag gtgacctatga 240
 tgaggaggag gctgcagcca gagcttatga ccttgcgcgt ctgaaatatt ggggtcctgg 300
 aactctcaat aattttcctg ttagtacta tgctagagat atggaagaga tgcagagcat 360
 ttcaaggagaa gattttctcg cttctctcag acggaanaag agtgggtttt caagggggaa 420
 gtcaaaatac cgtggactgc caagcaatca caaact 456

<210> 1895
 <211> 456
 <212> DNA
 <213> Eucalyptus grandis

<400> 1895

ggaaggcaat	gagagtgtac	tcttcaagg	aatgaagaag	gcaaggcgtg	agagaggatc	60
aacagcaaa	gaacggatta	gtaaaaatgc	tccctgtgct	gctggaaaac	ggagttctat	120
ctacagagc	gtcacaaggc	atagatggac	aggacgatat	gaagctcatc	tttgggacaa	180
aagtacttgg	aaccagaacc	aaaaataaaa	gggcaagcaa	gtgtacctag	gtgcctatga	240
tgaggaggag	gctgcagcca	gagcttatga	ccttgccgct	ctgaaatatt	ggggtcctgg	300
aactctcat	aattttcctg	ttagtgacta	tgctagagat	attgaagaga	tcagagcat	360
ttcaagggaa	gatttcctgg	cttctctcag	acggaaaagt	agtgggtttt	caaggggaa	420
gtcaaaatc	cgtggactgc	caagcaatca	caaaact			456

<210> 1896

<211> 388

<212> DNA

<213> *Eucalyptus grandis*

<400> 1896

gtaaatcaat	acctgggtcag	catcctaatt	tagcattcaa	tgttgccagt	attagatcca	60
accagagca	gcttcagcaa	cagcatgac	tgcccctcct	ccccagcca	gcaacaatgc	120
cttttgcctc	ttcagtaagt	atagcaaat	attccagat	gcctgggtta	gggtcaagag	180
gggttaacag	gatgacagat	gcattccatc	aaagtctcct	agctcaaggt	ggtgggctgc	240
agactggagt	tggtcatgact	gggttagaca	ctaggggagt	tgctcttcag	acagtatctc	300
ctgctaacca	tatatctcgg	gatgtaatct	ctaggaacac	gatggattcg	tcttcaactc	360
caccagttcc	ttatccgttt	ggccgggg				388

<210> 1897

<211> 202

<212> DNA

<213> *Eucalyptus grandis*

<400> 1897

atgcgaaaca	tgctcaaaaa	cccccaaat	catgggaagg	tggaagtggg	gctgattcgg	60
aggtaaacat	gttggaagat	tacgcttcag	aggactggat	tacagggtgt	gaccgcttcc	120
ggttgagctt	ggttgaaatt	cttgataagt	tgaataagta	tgccggagtc	tctgttcata	180
tgtaactgtc	ccttgaaaag	gc				202

<210> 1898

<211> 289

<212> DNA

<213> *Eucalyptus grandis*

<400> 1898

gttgaatggg	gattcaaaaa	atggccttcac	aaggcggcgg	cggcagcagc	ggtaaatgcca	60
gaggtggcgg	tggtcaataat	ggaaaatcca	ctgaagtcca	gccattgact	cggcagaatt	120
caatatacag	tctcactcct	gatgaggttc	aaaaccagtt	aggtgattta	gggaagccat	180
tgagcagcat	gaacctggac	gagcttttga	agaatgtctg	gacagctgag	gccggctcag	240
caatgtttat	ggatgttgag	ggcacggctg	tggtcaatca	aaatgctct		289

<210> 1899

<211> 477

<212> DNA

<213> *Eucalyptus grandis*

<400> 1899

cttgaatcgg	ggcgtgccca	gctcgatcgc	agcttcaagc	agctcaaaaa	gactgtatat	60
cactcgacga	gtgtgctgag	cacattgagc	ctgaagctgg	catcaaaagc	gccattggca	120
gtgaagtacc	agctcaaccc	cggctcactc	actgaatcag	atgattcaaa	gagcctctgc	180
tccactctgg	acaaagctctt	ggcttgggag	aagaagctct	atcagggaag	gaaggctaga	240
gaaggtgaga	agatatgaga	tgaaaaagaa	ttgtcagtag	tccagagcca	ggaaagcca	300
ggagaaagat	aaaccaagggt	agacaagacc	aaggctctcat	taaaagagt	gcaagcacta	360
atagctgtta	cgtcggaggg	tgctcttaca	acttcaaatg	caattattgg	cctcagagac	420
agtagacttg	tcccgcagct	tgttgaaactc	tgccatgggt	tcatgtacat	gtggagg	477

<210> 1900
 <211> 1243
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1900
 cccccctctt cctcagtcag ccagtcctctc tctctctctc tctcacatct ctagttttcag 60
 ccttttttctt ccatttggcc aagcagcgcc cgcgcgcgga ccgcgaaggt tccggatctg 120
 gtgctctgtt ctattccgtc cgtcgatagg aggtctaggc acgctgaaa aagtgtgatga 180
 gcgcaatttc actgatggag tggaaatgca aacctctctc gcagtgaggaa tggggagaatc 240
 ttatgatgtt cggttcaaaa gcgactgaaa cctctaagcc cgtcgagagc actgattggg 300
 gaatcgaggc ggaggagctg attgaccccg ggtccttatt tctgtatagc aatgggtggc 360
 gcagcagcagc ttgtaccagc attgatccgg gttacacttc tgtgtccaa agctcgaaat 420
 cggctctctg caattctctc tctacggagc aattgaaaat ctccgaaatc tctgtggagg 480
 cgcataagag cttttctctg cagagtagca agaaagaatt ggccggtgaat gattttaccg 540
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 ttctctcggt catgaaatca cctgatactc cagcaaaagag aaacaaatcc aactgtcagg 720
 gtacgtccgc cccacgtcgc caagtgtgaag gctgtaacct tgacctctct tcagctaaag 780
 attaccaccg caagcataga gtttgtgaga gtcaactctaa atgcccataag gtcacgtcga 840
 gtggtataga cgtctgggtt tgtcagcaat gcagcagggt tcaatgggcta tctgagttgt 900
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 ccccgccaga tgtgaccagc ttgaaatccgg ctgactgtct tgcaactgtt tatgggtggga 1020
 gcgagcagtt gaatccagc ttgagcagag ctccagctat ccacaccagg tctactgcata 1080
 gttttaaat ggccagataca caggacacta agctcataga gaaaggtcgc aagcttccaa 1140
 taggcggagg tgttgtgtgag tgtatcacta tcccaagcaa tgggataccg gacacccctca 1200
 agtccactgg attggcaca agctataacc aacttctatc atc 1243

<210> 1901
 <211> 366
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1901
 aaaaagata tatacctcgg cctatttggat agtgaagtag aggcagcaag ggcgtatgac 60
 aaggcagcta tcaaatgtaa tggaaagagag gctgtgacca accttgaacc tagtaagctac 120
 gatggagaga tgatttgcata agccagcaat gaaaaatagca tctatgggtga caatggctct 180
 gatctcaatc tcgggataat agcttctctc aggggaaatgg tggaaaacctt agagccctcg 240
 gacgacatgc gtacgggaag tagtttaagg gtaggaaact ctgctgcac cttgggtgat 300
 ccatctgttg aaggtttatc gatgacatct ggacaacctc tctgtgacgg gtgtttatcc 360
 taccgt 366

<210> 1902
 <211> 466
 <212> DNA
 <213> *Pinus radiata*

<400> 1902
 ttaattcatg cggcgggcgg cgacgactac gttgggttgt gcgaaggtgg atttgatcag 60
 gctcatgcgg ctgcgagagc ttacgacagg gcagctatca agtttcgagg agttgaagct 120
 gatataaatt ttactctcac cgaactatcaa gaagatttag accagacgag caagctctct 180
 aaagaagagt ttgtgcata tctccgtcgt caaagtactg gtttctctcg tggaaagttcc 240
 aagatagag gcgttaccct gcacaagtgt gggcgatggg aagccagaat ggggtcaattc 300
 ctaggaaaaa agtatatata ttggggatta tttgacagt aagaggagc tgcgaaggca 360
 tatgataag ctgctatcag gtgcaattgga aaggaggcag taacgaact tgcactatcag 420
 ttatatgaaa aagaatttct tgaagaaga agagagagtc agactt 466

<210> 1903
 <211> 240
 <212> DNA
 <213> *Pinus radiata*

<400> 1903
 gcttatttga atgcctgaca ctaactatgg aagcgaaacag acaaatgctt gcaaaaaaaa 60
 gaaaaagaa cgttccaagg attcaggaga agatggtgaa gatagacaga gagaacatcc 120
 ttctattgtt actgagcccg gtgaacttgc aagaggggaa aagaatgggt tagactatct 180
 ctttgatcct tatgaacagt gcgggaaatt tctgctggat gtgcaacata ttgcgaaggga 240

<210> 1904
 <211> 495
 <212> DNA
 <213> Pinus radiata

<400> 1904
 gccatggcaa tagatttttc aggaacgggaa tctcctcgtg tgacaggtctg cagatacccc 60
 attgccaggc cgagggttgt aaggcaaaact tgagcagtg ccaaacactac catcgccggc 120
 ataagggtttg tgaattgcac tcgaaggcctt ctactgttat tgtgggtgtt ttcatctcgc 180
 ggttctgccca acaatgtagc agatttcatc caagatctga attcgacgag ggaaacgaa 240
 gctgcagaaa gcgccttctc gaccacaaca gacgaaggag aaaacctcag ccaagtacat 300
 gtgttaccatc acaatctcag gctgggacaa caggttttaga aaatgataac cagacaacta 360
 aaggatcatc aggttcacatt acaacggctg ttcagaatac accgaacatt agcagaagca 420
 ctagtgtac tagtccgtcc ttgattacat cagtaccgat gatgatgttc ccaataact 480
 ataaaggaca tagtc 495

<210> 1905
 <211> 377
 <212> DNA
 <213> Eucalyptus grandis

<400> 1905
 taacactaca ttcatacccc caaacagcaa acggatcatc tcgcacaatc catcaagtgt 60
 agatcgaccg cgggaattctg cagcactggc aaagaggatg agggggctc acattcagaa 120
 tatagcggga gattgcgaact tgaagaacag attacatata caaagtggaa tccatataag 180
 tcagcaacaa agagctccct ttcccaatt ggccgagaa ttcgcacata gcaattcgcc 240
 cccccagcaa tctgaagaa accaaaaaga agccaccgat gatgctcatg gcaccaacgt 300
 ccaaggaaac ttctttaaag aggatgatcc aaaagttaact gctctgatc aacaagccga 360
 gctgctcagt tgccttg 377

<210> 1906
 <211> 377
 <212> DNA
 <213> Eucalyptus grandis

<400> 1906
 gtgatttttg tgcctgatac ttgaaaaagg gcatcaatc agtcaaacga gataaaaaa 60
 cataactatc aaaactcaat acatgatctc cagaaaaagc catcatcttt aattcagta 120
 aacgagcgtg tttttacga aacttcggctc ataagctgtg ccttgcaatc gtttgttaa 180
 cctccaaatg ctaaggctcag ggctcaatc ctctctgatac tttagagcagc tcatggcacc 240
 aacgtccaaag gaacatttct taaaaaggat gatccaaag ttaactgctct gattcaacaa 300
 gccgagctgc tcagttccct tgcggtgaaa gtcaatgcag ataactgga ccgaggtctt 360
 gaaaatgctt ggaaggg 377

<210> 1907
 <211> 1668
 <212> DNA
 <213> Pinus radiata

<400> 1907
 agctgtaagc tacctacgaa gtggaatcga agagagagag agtgagagcg taactaataa 60
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 cggcgccgtg aaagtggcga ttccggccgtg gtcgggggat tcggggacga ttgggttaaa 180
 gctgggcaag cggacctatt ttgaggcgtg gaaggcaatt ccgacagcga tccctcgcc 240

gtcttgcggt	ccggctgcc	agaagcagca	gtctgcggt	cagggaaacgc	atatggtgcc	300
gggggtgcag	gtggaggtat	gcgagatgga	actcacgcgc	gcaaaaggat	accacgcgcg	360
ccacaagggtc	tgcagctccc	actccaaagt	tcccgaaggtc	atcgctcaacg	ggatcgagca	420
gcgcttctgt	cagcaaatgta	cgaggtttca	tacgttgtct	gagtttgatg	aaaggaagcg	480
gagctgtcgg	agggcgtctg	ctggccacaa	ccagcggcgt	aggaaccccc	aaactaatct	540
aacggcgatg	aaagctgcga	gatttgtctc	cactttctat	gatgacgggc	gacttagagc	600
catctcgatg	ctctagatgc	cttcatgca	tcccagcata	gcttcaaaact	tggaggagaa	660
ttcgctcgat	ttcaaaacttg	gaggatattg	aaaaaggagct	tggccgagga	ttaaaggctga	720
ggatgatatca	tcatactgatg	ggcaattatc	aaccaataac	cctctcccg	cataatgctg	780
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gcactcatca	gtacaggcaa	agctccaggg	atcatgtggg	ccaatccttg	accttgatc	900
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ccctcaggat	agcttctatt	gatatgcaca	cgcggtcagg	tctcacaatg	gatcaactta	1080
tactagagga	tcaacctctt	atggctcaag	caccattgat	gcaaggagta	caacacacta	1140
tgtgtcattt	tgcagaagac	aagttactaa	caatgtatcc	ccagtcctct	actaatcttg	1200
caacaggtgg	gttccctgca	gtcactgtga	attctatgga	taagcagcac	caaggtctac	1260
cactcgtttc	cgatgcaggc	caaatgttaa	actttggagg	aaatatattt	ggctgtgtcg	1320
aggggagcag	tttcagagcg	tctcaagctg	caagttcaca	agatatattca	ggcaccatag	1380
atctgatgtg	cacgtctctg	gaaacacaaa	ctaattgatt	tcatgatcaa	cttggcatgg	1440
tgcaccaggg	aagtaaacag	tttaactgact	tgcagttggt	gaggtctttt	gaatcatcta	1500
tttatgacac	tcatcaactg	ctgtagctct	aatctgggtg	ttcttccggc	atgtttttct	1560
tgccctcaga	cttgaagata	actgttaaaa	cttcattatg	acaattatgt	gtaccctcta	1620
aatgcagaca	attgctttca	attacccttg	cttattttcaa	aaaaaaaa		1668

<210> 1908

<211> 821

<212> DNA

<213> *Eucalyptus grandis*

<400> 1908

ctctctctct	ctctctctct	ctcttttttt	cttttttttt	ctctctagca	gaggcacaga	60
ggcgctgcga	gggcactgat	gatgacgact	gggttagctc	caatgaatgg	gctctagaga	120
aactcgtctca	tggacgtggg	ttcgggctcg	tggacgcagg	agtcgggggtc	ctctctctct	180
ccccctctcg	agtcctctcaa	cggcctcagg	ttcggcgcaga	aaatctactt	ccagaataat	240
aaacagtagta	ataatgcgcg	cgcaaccaag	aacggctccg	gctccgggtc	cggtctctcc	300
tcgcgcgcgc	cgccccgcgc	cgggtcgggc	acgcccccca	agaaggttag	ggctccgcgc	360
ggcgccggcg	gctgcggggc	gatccagggc	gggcagcccc	cgaggttgcca	ggtggaaggc	420
tgcccggttg	atctgagcga	tgcacaggct	tactattcca	ggcacaaagt	gtcgggcatg	480
cactccaagt	cgcgccacct	catcgctgcc	ggcatcgagc	agaagttctg	ccagcagctg	540
agcagattcc	atcagcttac	tgaatttgac	caagggaaac	gaagctgtcg	tagacgtttg	600
gctggtcaca	atgagcgccg	gaggaagccc	ccactctggg	cgctactatc	ctctcgctat	660
ggggcactgc	aatcctctat	atttgagaac	accaccagag	tgggttagtt	tctgatggat	720
ttcacagcat	accagaagca	tgcattggta	gcgccacgtt	ttcttgagcg	caegcacact	780
ggagatctag	tccccggacc	aggaaaggct	tatctctatc	c		821

<210> 1909

<211> 105

<212> DNA

<213> *Eucalyptus grandis*

<400> 1909

gggaagagga	gcgtagagtg	ggattcgaac	gattggaagt	gggacgggtga	tctgttctgct	60
gctagccgcg	tgaacccggt	ccggtccgat	ttccccggcc	ggcag		105

<210> 1910

<211> 338

<212> DNA

<213> *Pinus radiata*

<400> 1910

cagaagagac	ctgccattgga	aacacatttt	gcaggacaga	aatttcacat	ttcacaggct	60
cacagatacc	ccagtgccag	tccgaggggt	gtaaaacaaa	cttgagcagt	gccaacacct	120
accatcgccg	acataaaagt	tggaattcc	actctaaagg	tctacgggtc	gtgtgtggcg	180
gtcacagattca	gcgggttttg	caacagtgtg	gtagatttca	tcagacatct	gaatttgacg	240
gaggaagcg	gagctgcaga	aagcgcttg	ctgaccacaa	cagacgcggg	cggaaccta	300
aaccgagtgca	atgtactaca	tcccaatgtc	agggcagg			338

<210> 1911

<211> 465

<212> DNA

<213> Pinus radiata

<400> 1911

tcgacatgg	cctttgcatt	ttcttgaaga	agctgtgatt	gttcgaccga	cacgttactc	60
attcacattg	ctctcccatc	tccttcaatc	aggattccag	aattgcccgt	cgaatggat	120
gaagtccaag	tcaaggtcga	cattcagagc	acaaatgtca	gtgcgacga	gcccaggcct	180
gcgaagcgcc	agggttttga	gctcgccaag	agccctgaaa	acgtggcttc	gaattccact	240
gcgctctctc	ctccgaaaaa	acccaaagct	gcttcttctc	cttcttcttc	gtcgcgcaga	300
gcgcagcttc	ccgcttgcca	ggtggagaaa	tgccgcgcg	atcttgctga	tgccaaagag	360
tactatagga	ggcacagggt	ttgcgaccaa	cattcaaaag	ctcgcaattg	gctcgttctt	420
ggcctccagc	aacgctctcg	ccagcaatgt	agcagatttc	atgtg		465

<210> 1912

<211> 509

<212> DNA

<213> Pinus radiata

<400> 1912

ctccctacaa	aagtagctcc	cctcttgact	ccaggcggtc	ttccaggtcc	ataacgatac	60
ggattacacc	cacgcacccc	atgtcttcca	ctctcatcgt	ttcttctccc	tcccctgaca	120
caccatcaca	gtctgcgcgt	gtgcgcccga	catctacccg	agacagattc	tccgtcatgg	180
aacctccaag	taagcgagcc	agggttgatc	ttaacgctga	acagcggaaga	gaggccagg	240
cccacogtaa	tcgaatttgc	gctcaaaact	ctcgcgataa	acgcaaggcg	caattccact	300
acatggagca	gcgcgtggga	caactggagg	aagagaacca	acgactacga	cgaggcatgg	360
gcctctctca	attcacgcca	gcccgaacag	acaaagtctg	cagcctcgag	agagaatcag	420
tacaggcccg	cgagaacaga	gagctcaagg	agaggatcaa	gagctctagag	agcgggtggg	480
cgccgctcat	caaagcgttg	caggctctca				509

<210> 1913

<211> 151

<212> PRT

<213> Pinus radiata

<400> 1913

Glu	Gly	Asn	Glu	Ser	Asp	Leu	Leu	Lys	Gly	Met	Lys	Lys	Ala	Arg	Arg
1				5					10					15	
Glu	Arg	Gly	Ser	Thr	Ala	Lys	Glu	Arg	Ile	Ser	Lys	Met	Pro	Pro	Cys
			20					25					30		
Ala	Ala	Gly	Lys	Arg	Ser	Ser	Ile	Tyr	Arg	Gly	Val	Thr	Arg	His	Arg
			35					40				45			
Trp	Thr	Gly	Arg	Tyr	Glu	Ala	His	Leu	Trp	Asp	Lys	Ser	Thr	Trp	Asn
	50					55					60				
Gln	Asn	Gln	Asn	Lys	Lys	Gly	Lys	Gln	Val	Tyr	Leu	Gly	Ala	Tyr	Asp
	65				70					75				80	
Glu	Glu	Glu	Ala	Ala	Ala	Arg	Ala	Tyr	Asp	Leu	Ala	Ala	Leu	Lys	Tyr
				85					90				95		
Trp	Gly	Pro	Gly	Thr	Leu	Ile	Asn	Phe	Pro	Val	Ser	Asp	Tyr	Ala	Arg
			100					105					110		
Asp	Ile	Glu	Glu	Met	Gln	Ser	Ile	Ser	Arg	Glu	Asp	Phe	Leu	Ala	Ser
			115					120					125		
Leu	Arg	Arg	Lys	Ser	Ser	Gly	Phe	Ser	Arg	Gly	Met	Ser	Lys	Tyr	Arg

130 135 140
 Gly Leu Pro Ser Asn His Lys
 145 150

<210> 1914
 <211> 128
 <212> PRT
 <213> Eucalyptus grandis

<400> 1914
 Lys Ser Ile Pro Gly Gln His Pro Asn Leu Ala Phe Asn Val Gly Ser
 1 5 10 15
 Ile Arg Ser Asn Gln Gln Leu Gln Gln His Asp Leu Pro Leu
 20 25 30
 Leu Pro Lys Pro Ala Thr Met Pro Phe Ala Ser Ser Val Ser Ile Ala
 35 40 45
 Asn Asn Ser Gln Met Pro Gly Leu Gly Ser Arg Gly Val Ile Arg Met
 50 55 60
 Thr Asp Ala Ser Ile Lys Ser Ser Leu Ala Gln Gly Gly Leu Gln
 65 70 75 80
 Thr Gly Val Gly Met Thr Gly Leu Asp Thr Arg Gly Val Ala Leu Gln
 85 90 95
 Thr Val Ser Pro Ala Asn His Ile Ser Pro Asp Val Ile Ser Arg Asn
 100 105 110
 Thr Met Asp Ser Ser Ser Leu Ser Pro Val Pro Tyr Pro Phe Gly Arg
 115 120 125

<210> 1915
 <211> 66
 <212> PRT
 <213> Eucalyptus grandis

<400> 1915
 Ala Lys His Ala Gln Thr Pro Pro Thr Ser Trp Glu Gly Gly Ser Gly
 1 5 10 15
 Ala Asp Ser Glu Val Asn Met Leu Lys Asp Tyr Ala Ser Glu Asp Trp
 20 25 30
 Ile Thr Gly Val Asp Arg Phe Arg Leu Ser Leu Val Glu Phe Leu Asp
 35 40 45
 Lys Leu Asn Lys Tyr Ala Glu Ser Ser Val His Met Tyr Val Ser Leu
 50 55 60
 Glu Lys
 65

<210> 1916
 <211> 89
 <212> PRT
 <213> Eucalyptus grandis

<400> 1916
 Met Ala Ser Gln Gly Gly Gly Ser Ser Gly Asn Ala Arg Gly Gly
 1 5 10 15
 Gly Gly Asn Asn Gly Lys Ser Thr Glu Val Gln Pro Leu Thr Arg Gln
 20 25 30
 Asn Ser Ile Tyr Ser Leu Thr Leu Asp Glu Val Gln Asn Gln Leu Gly
 35 40 45
 Asp Leu Gly Lys Pro Leu Ser Ser Met Asn Leu Asp Glu Leu Leu Lys
 50 55 60
 Asn Val Trp Thr Ala Glu Ala Gly Gln Ser Met Phe Met Asp Val Glu
 65 70 75 80
 Gly Thr Ala Val Ala Asn Gln Asn Ala

85

<210> 1917
 <211> 159
 <212> PRT
 <213> Eucalyptus grandis

<400> 1917
 Leu Glu Ile Gly Arg Ala Gln Leu Asp Arg Ser Phe Lys Gln Leu Lys
 1 5 10 15
 Lys Thr Val Tyr His Ser Thr Ser Val Leu Ser Thr Ser Ser
 20 25 30
 Trp Ser Ser Lys Pro Pro Leu Ala Val Lys Tyr Gln Leu Asn Pro Gly
 35 40 45
 Ser Leu Thr Glu Ser Asp Asp Ser Lys Ser Leu Cys Ser Thr Leu Asp
 50 55 60
 Lys Leu Leu Ala Trp Glu Lys Lys Leu Tyr Glu Glu Val Lys Ala Arg
 65 70 75 80
 Glu Gly Glu Lys Ile Glu His Glu Lys Lys Leu Ser Val Leu Gln Ser
 85 90 95
 Gln Glu Gly Lys Gly Glu Asp Glu Thr Lys Val Asp Lys Thr Lys Ala
 100 105 110
 Ser Leu Asn Lys Leu Gln Ala Leu Ile Ala Val Thr Ser Glu Ala Val
 115 120 125
 Ser Thr Thr Ser Asn Ala Ile Ile Gly Leu Arg Asp Ser Arg Leu Val
 130 135 140
 Pro Gln Leu Val Glu Leu Cys His Gly Phe Met Tyr Met Trp Arg
 145 150 155

<210> 1918
 <211> 349
 <212> PRT
 <213> Eucalyptus grandis

<400> 1918
 Met Glu Trp Asn Ala Lys Pro Pro Leu Gln Trp Glu Trp Glu Asn Leu
 1 5 10 15
 Met Met Phe Gly Ser Lys Ala Thr Glu Thr Ser Lys Pro Leu Arg Ala
 20 25 30
 Thr Asp Trp Gly Ile Glu Ala Glu Glu Leu Ile Asp Pro Gly Ser Leu
 35 40 45
 Phe Leu Tyr Glu Asn Gly Gly Gly Ser Ser Ser Cys Thr Ser Ile Asp
 50 55 60
 Pro Gly Tyr Thr Ser Val Ser Lys Ser Ser Lys Ser Ala Ser Val Asn
 65 70 75 80
 Ser Ser Ser Thr Asp Glu Leu Lys Ile Ser Lys Phe Ser Val Glu Ala
 85 90 95
 His Glu Gly Phe Ser Leu Gln Ser Ser Lys Lys Glu Leu Ala Val Asn
 100 105 110
 Asp Phe Thr Gly Met Ser Pro Ala Leu Glu Pro Ser Val Cys Ser Gly
 115 120 125
 Glu Pro Leu Leu Ser Leu Lys Leu Gly Lys Arg Ile Tyr Phe Glu Asn
 130 135 140
 Thr Ile Asp Lys Asp His Val Lys Thr Gln Asp Leu Pro Ser Val Met
 145 150 155 160
 Lys Ser Pro Asp Thr Pro Ala Lys Arg Asn Lys Ser Asn Cys Gln Gly
 165 170 175
 Thr Ser Ala Pro Arg Cys Gln Val Glu Gly Cys Asn Leu Asp Leu Ser
 180 185 190
 Ser Ala Lys Asp Tyr His Arg Lys His Arg Val Cys Glu Ser His Ser
 195 200 205

Lys Cys Pro Lys Val Ile Val Ser Gly Ile Glu Arg Arg Phe Cys Gln
 210 215
 Gln Cys Ser Arg Phe His Gly Leu Ser Glu Phe Asp Glu Lys Lys Arg
 225 230 235 240
 Ser Cys Arg Lys Arg Leu Ser Asp His Asn Ala Arg Arg Arg Lys Pro
 245 250 255
 Pro Pro Asp Val Thr Gln Leu Asn Pro Ala Arg Leu Ser Ala Leu Phe
 260 265 270
 Tyr Gly Gly Met Gln Gln Leu Asn Pro Val Leu Ser Arg Ala Pro Ala
 275 280 285
 Ile His Thr Arg Ser Thr Ala Ser Phe Lys Trp Ala Asp Thr Gln Asp
 290 295 300
 Thr Lys Leu Ile Glu Lys Gly Pro Lys Leu Pro Ile Gly Gly Gly Val
 305 310 315 320
 Gly Glu Cys Ile Thr Ile Pro Ser Asn Gly Ile Pro Asp Thr Leu Lys
 325 330 335
 Ser Thr Gly Leu Gly Lys Ser Tyr Asn Glu Leu Leu Ser
 340 345

<210> 1919

<211> 122

<212> PRT

<213> *Eucalyptus grandis*

<400> 1919

Lys Lys Tyr Ile Tyr Leu Gly Leu Phe Asp Ser Glu Val Glu Ala Ala
 1 5 10 15
 Arg Ala Tyr Asp Lys Ala Ala Ile Lys Cys Asn Gly Arg Glu Ala Val
 20 25 30
 Thr Asn Phe Glu Pro Ser Thr Tyr Asp Gly Glu Met Ile Ala Lys Ala
 35 40 45
 Ser Asn Glu Asn Ser Ile Tyr Gly Asp His Gly Leu Asp Leu Asn Leu
 50 55 60
 Gly Ile Ser Ala Ser Ser Arg Gly Met Val Glu Thr Leu Glu Pro Ser
 65 70 75 80
 Asp Asp Met Arg Gln Gly Ser Ser Leu Arg Val Gly Asn Ser Ala Ala
 85 90 95
 Ser Trp Gly Asp Pro Ser Val Glu Gly Leu Ser Met Thr Ser Gly Gln
 100 105 110
 Pro Leu Leu Asp Gly Cys Leu Ser Tyr Arg
 115 120

<210> 1920

<211> 155

<212> PRT

<213> *Pinus radiata*

<400> 1920

Leu Ile His Gly Gly Gly Asp Asp Tyr Val Gly Leu Cys Glu Gly
 1 5 10 15
 Gly Phe Asp Thr Ala His Ala Ala Ala Arg Ala Tyr Asp Arg Ala Ala
 20 25 30
 Ile Lys Phe Arg Gly Val Glu Ala Asp Ile Asn Phe Thr Leu Thr Asp
 35 40 45
 Tyr Gln Glu Asp Leu Asp Gln Thr Ser Lys Leu Ser Lys Glu Glu Phe
 50 55 60
 Val His Ile Leu Arg Arg Gln Ser Thr Gly Phe Ser Arg Gly Ser Ser
 65 70 75 80
 Lys Tyr Arg Gly Val Thr Leu His Lys Cys Gly Arg Trp Glu Ala Arg
 85 90 95
 Met Gly Gln Phe Leu Gly Lys Lys Tyr Ile Tyr Leu Gly Leu Phe Asp

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          100                      105                      110
Ser Glu Glu Glu Ala Ala Arg Ala Tyr Asp Lys Ala Ala Ile Arg Cys
          115                      120                      125
Asn Gly Lys Glu Ala Val Thr Asn Phe Asp Pro Ser Leu Tyr Glu Lys
          130                      135                      140
Glu Ile Leu Glu Glu Arg Arg Glu Ser Gln Thr
          145                      150                      155

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<210> 1921
<211> 79
<212> PRT
<213> Pinus radiata

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          <400> 1921
Leu Ile Gly Met Pro Asp Thr Asn Tyr Gly Ser Glu Gln Thr Asn Ala
  1                      5                      10                      15
Cys Lys Lys Gln Lys Arg Ile Arg Ser Lys Asp Ser Gly Glu Asp Gly
          20                      25                      30
Glu Asp Arg Gln Arg Glu His Pro Phe Ile Val Thr Glu Pro Gly Glu
          35                      40                      45
Leu Ala Arg Gly Lys Lys Asn Gly Leu Asp Tyr Leu Phe Asp Leu Tyr
          50                      55                      60
Glu Gln Cys Gly Lys Phe Leu Leu Asp Val Gln His Ile Ala Lys
          65                      70                      75

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<210> 1922
<211> 164
<212> PRT
<213> Pinus radiata

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          <400> 1922
His Gly Asn Arg Phe Cys Arg Thr Gly Ile Ser Ser Cys Ala Gly Ser
  1                      5                      10                      15
Gln Ile Pro His Cys Gln Ala Glu Gly Cys Lys Ala Asn Leu Ser Ser
          20                      25                      30
Ala Lys His Tyr His Arg Arg His Lys Val Cys Glu Leu His Ser Lys
          35                      40                      45
Ala Ser Thr Val Ile Val Gly Gly Phe Ile Gln Arg Phe Cys Gln Gln
          50                      55                      60
Cys Ser Arg Phe His Pro Arg Ser Glu Phe Asp Glu Gly Lys Arg Ser
          65                      70                      75
Cys Arg Lys Arg Leu Ala Asp His Asn Arg Arg Arg Arg Lys Pro Gln
          85                      90                      95
Pro Ser Thr Cys Val Thr Ser Gln Ser Gln Ala Gly Thr Thr Gly Leu
          100                      105                      110
Glu Asn Asp Asn Gln Thr Thr Lys Gly Ser Ser Gly His Ile Thr Thr
          115                      120                      125
Ala Val Gln Asn Thr Pro Asn Ile Ser Arg Ser Thr Ser Ser Thr Ser
          130                      135                      140
Pro Ser Leu Ile Thr Ser Val Pro Met Met Met Phe Pro Asn Asn Tyr
          145                      150                      155
Lys Gly His Ser

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<210> 1923
<211> 125
<212> PRT
<213> Eucalyptus grandis

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          <400> 1923
Asn Thr Thr Phe Ile Thr Pro Asn Ser Lys Arg Ile Ile Ser His Asn

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1	5	10	15
Pro Ser Ser Val Asp Arg Pro Ala Glu Ser Ala Ala Leu Ala Lys Arg	20	25	30
Met Arg Arg Ala His Ile Gln Asn Ile Ala Gly Asp Cys Asn Leu Lys	35	40	45
Asp Arg Leu His Ile Gln Ser Gly Ile Thr Tyr Ser Gln Gln Gln Arg	50	55	60
Ala Pro Phe Ser Thr Leu Ala Gln Asn Phe Arg Thr Ser Asn Ser Pro	65	70	75
Pro Gln Gln Ser Glu Ser Asn Gln Lys Glu Ala Thr Asp Asp Ala His	85	90	95
Gly Thr Asn Val Gln Gly Thr Phe Leu Lys Lys Asp Asp Pro Lys Val	100	105	110
Thr Ala Leu Ile Gln Gln Ala Glu Leu Leu Ser Ser Leu	115	120	125

<210> 1924
 <211> 50
 <212> PRT
 <213> Eucalyptus grandis

<400> 1924
Ala Ala His Gly Thr Asn Val Gln Gly Thr Phe Leu Lys Lys Asp Asp
1 5 10 15
Pro Lys Val Thr Ala Leu Ile Gln Gln Ala Glu Leu Leu Ser Ser Leu
20 25 30
Ala Val Lys Val Asn Ala Asp Asn Met Asp Gln Ser Leu Glu Asn Ala
35 40 45
Trp Lys
50

<210> 1925
 <211> 257
 <212> PRT
 <213> Pinus radiata

<400> 1925
Ala Val Ser Tyr Leu Arg Ser Gly Ile Glu Glu Arg Glu Ser Glu Arg
1 5 10 15
Leu Thr Asn Lys Met Asn Met Lys Ile Arg Thr Ser Asp Thr Ser Thr
20 25 30
Pro Asp Asp Gln Gln His Ser Gly Ala Val Lys Val Ala Ile Pro
35 40 45
Ala Val Ser Gly Asp Ser Gly Thr Ile Gly Leu Lys Leu Gly Lys Arg
50 55 60
Thr Tyr Phe Glu Ala Val Lys Ala Ile Pro Thr Ala Ile Pro Ser Pro
65 70 75 80
Ser Cys Val Pro Ala Ala Lys Lys Gln Gln Ser Ala Leu Gln Gly Thr
85 90 95
His Met Val Pro Arg Cys Gln Val Glu Gly Cys Glu Met Glu Leu Thr
100 105 110
Ala Ala Lys Asp Tyr His Arg Arg His Lys Val Cys Glu Leu His Ser
115 120 125
Lys Phe Pro Lys Val Ile Val Asn Gly Ile Glu Gln Arg Phe Cys Gln
130 135 140
Gln Cys Ser Arg Phe His Thr Leu Ser Glu Phe Asp Glu Gly Lys Arg
145 150 155 160
Ser Cys Arg Arg Arg Leu Ala Gly His Asn Gln Arg Arg Arg Lys Pro
165 170 175
Gln Leu Asn Ser Thr Ala Met Lys Ala Ala Arg Phe Ala Ser Thr Phe
180 185 190

Tyr Asp Asp Gly Arg Leu Ser Ser Ile Leu Met Ala Arg Ser Pro Phe
 195 200 205
 Met His Pro Arg Ile Ala Ser Asn Leu Glu Glu Asn Ser Leu Asp Phe
 210 215 220
 Lys Leu Gly Gly Tyr Gly Lys Gly Ala Trp Pro Arg Ile Lys Ala Glu
 225 230 235 240
 Asp Val Ser Ser Tyr Asp Gly Gln Leu Ser Thr Lys Tyr Pro Leu Pro
 245 250 255
 Ser

<210> 1926
 <211> 230
 <212> PRT
 <213> Eucalyptus grandis

<400> 1926
 Met Asp Val Gly Ser Gly Ser Trp Thr Thr Glu Ser Gly Ser Ser Ser
 1 5 10 15
 Pro Pro Pro Leu Glu Ser Leu Asn Gly Leu Lys Phe Gly Gln Lys Ile
 20 25 30
 Tyr Phe Gln Asn Asn Asn Ser Ser Asn Asn Ala Ala Ala Pro Lys Asn
 35 40 45
 Gly Ser Gly Ser Gly Ser Gly Ser Ser Ala Ala Ala Pro Ala Pro
 50 55 60
 Gly Ser Gly Thr Pro Pro Lys Lys Val Arg Ala Ser Ala Gly Gly Gly
 65 70 75 80
 Gly Cys Gly Ala Ile Gln Gly Gly Gln Pro Pro Arg Cys Gln Val Glu
 85 90 95
 Gly Cys Arg Val Asp Leu Ser Asp Ala Lys Ala Tyr Tyr Ser Arg His
 100 105 110
 Lys Val Cys Gly Met His Ser Lys Ser Ala Thr Val Ile Val Ala Gly
 115 120 125
 Ile Glu Gln Arg Phe Cys Gln Gln Cys Ser Arg Phe His Gln Leu Thr
 130 135 140
 Glu Phe Asp Gln Gly Lys Arg Ser Cys Arg Arg Arg Leu Ala Gly His
 145 150 155 160
 Asn Glu Arg Arg Arg Lys Pro Pro Pro Gly Ser Leu Leu Ser Ser Arg
 165 170 175
 Tyr Gly Arg Leu Gln Ser Ser Ile Phe Glu Asn Thr Thr Arg Val Gly
 180 185 190
 Ser Phe Leu Met Asp Phe Thr Ala Tyr Pro Lys His Ala Trp Ser Ala
 195 200 205
 Pro Arg Phe Ser Glu Arg Thr Thr Pro Gly Asp Leu Val Pro Gly Pro
 210 215 220
 Gly Lys Val Tyr Pro His
 225 230

<210> 1927
 <211> 35
 <212> PRT
 <213> Eucalyptus grandis

<400> 1927
 Gly Lys Arg Ser Val Glu Trp Asp Ser Asn Asp Trp Lys Trp Asp Gly
 1 5 10 15
 Asp Leu Phe Val Ala Arg Pro Leu Asn Pro Val Pro Ser Asp Phe Pro
 20 25 30
 Gly Arg Gln
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<210> 1928
 <211> 112
 <212> PRT
 <213> Pinus radiata

<400> 1928
 Glu Glu Thr Cys His Gly Asn Thr Phe Cys Arg Thr Glu Ile Ser Ser
 1 5 10 15
 Phe Thr Gly Ser Gln Ile Pro Gln Cys Gln Ser Glu Gly Cys Lys Ala
 20 25 30
 Asn Leu Ser Ser Ala Lys His Tyr His Arg Arg His Lys Val Cys Glu
 35 40 45
 Phe His Ser Lys Ala Pro Thr Val Val Val Gly Gly Gln Ile Gln Arg
 50 55 60
 Phe Cys Gln Gln Cys Ser Arg Phe His Gln Thr Ser Glu Phe Asp Gly
 65 70 75 80
 Gly Lys Arg Ser Cys Arg Lys Arg Leu Ala Asp His Asn Arg Arg Arg
 85 90 95
 Arg Lys Pro Lys Pro Ser Gln Cys Thr Ser Gln Cys Gln Ala Gly
 100 105 110

<210> 1929
 <211> 117
 <212> PRT
 <213> Pinus radiata

<400> 1929
 Met Asp Glu Val Gln Val Lys Val Asp Ile Gln Ser Thr Asn Val Ser
 1 5 10 15
 Ala Asp Glu Pro Arg Pro Ala Lys Arg Gln Gly Phe Glu Leu Ala Lys
 20 25 30
 Ser Pro Glu Asn Val Ala Ser Lys Ser Thr Ala Leu Ser Ser Pro Lys
 35 40 45
 Lys Pro Lys Ala Ala Ser Ser Ser Ser Ser Ser Pro Arg Ala Gln
 50 55 60
 Pro Pro Ala Cys Gln Val Glu Lys Cys Ala Ala Asp Leu Ala Asp Ala
 65 70 75 80
 Lys Glu Tyr Tyr Arg Arg His Arg Val Cys Glu Gln His Ser Lys Ala
 85 90 95
 Arg Ile Val Leu Val Leu Gly Leu Gln Gln Arg Phe Cys Gln Gln Cys
 100 105 110
 Ser Arg Phe His Val
 115

<210> 1930
 <211> 143
 <212> PRT
 <213> Pinus radiata

<400> 1930
 Met Ser Ser Thr Ser Tyr Ser Ser Pro Ser Pro Asp Thr Pro Ser
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 20 25 30
 Met Glu Pro Pro Arg Lys Arg Ala Arg Ala Asp Leu Asn Ala Glu Gln
 35 40 45
 Arg Arg Glu Ala Arg Ala His Arg Asn Arg Ile Ala Ala Gln Asn Ser
 50 55 60
 Arg Asp Lys Arg Lys Ala Gln Phe Thr Tyr Met Glu Gln Arg Val Ala
 65 70 75 80
 Gln Leu Glu Glu Glu Asn Gln Arg Leu Arg Ala Gly Met Gly Leu Ser

	85		90		95	
Gln Phe Thr	Pro Ala Asp Asn Asp Lys Phe Val	Ser Leu Glu Arg Glu				
	100	105	110			
Ser Val Gln Ala Arg Glu Asn Arg Glu Leu Lys Glu Arg Ile Lys Ser						
	115	120	125			
Leu Glu Ser Gly Trp Ser Ala Val Ile Lys Ala Leu Gln Ala Ser						
	130	135	140			

<210> 1931
 <211> 199
 <212> DNA
 <213> Pinus radiata

<400> 1931

aacaactgaa	caataaaaaat	cacaagcaact	gaatcttaacc	atctctccac	aaagcagaat	60
catttttttag	cagtcgcagaa	ttaaatcaaa	acacaattgt	tcggctgtaa	agcaaaagatg	120
aagcatcacg	tagtgcacaa	ttgctgtagc	aagaaagctg	taaaagagagg	cttctgggtcg	180
cccggaggaag	atttgaagc					199

<210> 1932
 <211> 380
 <212> DNA
 <213> Eucalyptus grandis

<400> 1932

gggactctcta	ggaacttcgt	gaaaacgcgg	acgccgacac	aggtggcgag	ccacgcccag	60
aagtacttcc	tcggcgagac	caaccagaa	cggcgacgac	ggcggtccag	cctcttcgac	120
ataaccacccg	actcgtactt	tgggggttca	agctctacaa	tggaggagggg	tcatcatcaa	180
gcgcaccaag	taccagctt	ccctctttcc	ttgcttcggg	cgggtttcacc	gggaaccggc	240
gagaaactcg	tggaaaagct	gcgactaaga	aaagaggggt	gccagtcgaa	acccaccgcc	300
tcgaagccca	tcgcgccggt	ccgatcctt	cccatccctc	cgtctcgaa	aatggcggtc	360
ctcgacctca	acaaggcgac					380

<210> 1933
 <211> 630
 <212> DNA
 <213> Eucalyptus grandis

<400> 1933

ggaccggcga	gtttctccgg	ggaagaccgg	cggagcggcg	gcggcgccgg	cggcgccggg	60
gggaaaagct	cccgcccttc	gtcgtttcgc	gggtccgtgga	ataggcgaca	agtcggattg	120
cggtgcgtgt	cgcgcctcgc	ttcgatatata	agggcggtct	gctcgtgctg	ctactggctt	180
gaggagtcac	ccgagctcga	gcgttacgcg	cttcccgaa	gttcgcgcgg	ctagggtttt	240
tttatatttc	ccctctgttt	tcctcgtttc	ggccacgggtc	gttgcttcgc	tttaaaagga	300
ttggcgcat	tgagctgggc	ggagcttgag	gggttcggcg	gtggcgccgg	aagtggagtg	360
gagcgggggg	tggtgggtgt	cgacatggta	atcgggtttc	gacgatgccg	agctttgttc	420
cagcgacacc	ggcctccaat	tcatttggtt	cggagggaata	cgttgtccag	tctaatacaa	480
atacagattt	tgggtcgttt	gagcattcac	ttggattccg	catagaggat	gccatcaacc	540
ttagcagaa	agatcctgtc	tttaatacaga	taaaacccaa	cggctcgagct	cttggaactg	600
acattcaagc	tcgtgctttt	aataagctctg				630

<210> 1934
 <211> 524
 <212> DNA
 <213> Eucalyptus grandis

<400> 1934

ctttactatt	ctaagtcctc	tacttctggt	ttggaatcac	taatttcttg	gtctcacttt	60
cgcttgccct	atcacccgag	agttctctgc	agaaacttca	cagccgctct	ctgctctttc	120
accacaactt	gtatgcctgg	ttttactagg	gctaggaaga	tgagcatctg	cggagaagaa	180
gagggtgacc	tcgcaagggg	gccatggact	cgcgaggaag	acaatttgct	cattcactcg	240

atcacatgcc	acggcgagggg	acgctggaat	atgttggcga	agagcgagg	attgaagaga	300
actggcaaaa	gctgcagatc	aaggtggctg	aattacctga	gacccgacat	caagcgcggg	360
aattctaccc	cgcaagaaca	gtccatgac	cttgaacttc	accacaaatg	gggcaacagg	420
tggtcgaaaa	tcgcgcagta	tctcccagga	aggacagata	acgagatcaa	gaactactgg	480
aggacgagg	tgcaagaaca	agcgcgccag	ctcaacatcg	aatc		524

<210> 1935
 <211> 440
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1935						
gtgtgtgtgac	aaggtgggat	tgaagaaaag	gccgtggaca	cctgaagaag	accagaagct	60
cctcgcttac	atcgaagaga	acggccatgg	aagctggcgt	gctttgcctt	ccaagactgg	120
ctttcagaga	tgccgggaaaa	gtgtgaggct	aagatggact	aattatctta	gacctgacat	180
caagagaggg	aagttcagct	tacaagagga	acagaccata	attcaactcc	atgcccttct	240
tggaatagg	tggtcggcca	tagcaactca	tttaccgaag	cgaacagaca	acgagatcaa	300
gaactactgg	aatacgcctc	tgaagaagag	attggcgaaa	atgggaatgt	acccggtgac	360
ccataagcct	aaaaatgagc	ccctagtctc	tagtgacggt	caatccaaga	gcgcggctaa	420
gctcagtcac	ctggctcagt					440

<210> 1936
 <211> 299
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1936						
cggacccttc	cgaaaaatgc	agggctcagg	agatgcggaa	agagctgtcg	cctgcgggtgg	60
acgaaatacc	tgccggccgc	tatcaagaga	gggaggttca	cgttcgagga	agaggagacc	120
atcatccagt	tgcatgggtg	tttggggaac	aagtggtcgg	ctatcgccgc	tcaattgcc	180
gggaggaacc	acaacagagat	caagaactac	tggaaacccc	acatcaagaa	aaggctactt	240
aaaatgggga	tcgacccggt	gacacactcc	ccacgcctcg	atcttctaga	tctgtcctc	299

<210> 1937
 <211> 377
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1937						
ggccctcttc	tctttctctc	tctctgtgtc	tgtctttctt	gtggatccac	caggetctgc	60
tttaagaata	tacagcagcg	agcaggcaag	acaacgcccc	atctctcttc	tctctctctc	120
tctctctgtg	gctctgtctt	tcttttgttt	cttgccgttt	tgggggtgtg	gtgttgggtt	180
gtgtgaattg	gagcaggagt	ggggaggggg	agactgcagc	tgaagaggat	agagaaacag	240
atcaaccggc	aagtacacct	ctccaagagg	agggcggggt	tgctcaagaa	ggccacagag	300
atctccgtac	tctgcgagcg	cgaggtcgcc	ctcatcatct	tctccgccaa	gggcaagctc	360
ttcagctact	ccacgcga					377

<210> 1938
 <211> 278
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1938						
tgtagcaag	catgtatgta	ctaactagta	gtttttgttaa	agcatgatgt	cgaaaaccttg	60
agtagcaag	tgaagatggc	tgaagagacg	gttaaaagag	taaccggact	gaacccaatg	120
ctgcatgtga	tgtccgacat	gtcttctgtg	gggtgtgccac	catttgatgg	tagtctctct	180
gatacatcag	cggatgctgc	agtctctgtg	cgagatgacc	caaagcacca	attctatcaa	240
accaattcta	gtaaccocgc	atcatctgtg	gacgatat			278

<210> 1939
 <211> 342

<212> DNA

<213> *Eucalyptus grandis*

<400> 1939

acaggttgct	caatttaagag	ttgagaattc	tactttactg	aaacgtctct	cggacataag	60
ccagaagtac	aatgtagcag	ctgttgacaa	cagagttttt	gaagctgatg	tcgaaacctt	120
gagagccagag	gtgaagatgg	ctgaagagac	ggtlaaaaga	gtaacccggac	tgaaaccaat	180
gctgcatgtg	atgtcccgaca	tgtctctctg	gggtgtgccca	ccatttggatg	gtagtctctt	240
tgatacatca	gcggatgctg	cagttctctg	gcgagatgac	ccaaagcacc	aattctatca	300
aaccaattct	atgtaacccc	gcattcatctg	ctgacgatat	ga		342

<210> 1940

<211> 376

<212> DNA

<213> *Eucalyptus grandis*

<400> 1940

gctgttttca	catctttttg	aacacgcccc	taaagatccg	ccctcagagc	cgcctctgtc	60
cggtggctgc	tgacattcca	ctagaaaatt	cccgaccaag	ttcccccttt	ctaagccaga	120
ttgggaaaag	ttcatatttg	tccaacagta	gtagtggatt	taaatgggga	ggcactcttg	180
ctgctacaag	cagaagctga	ggaagggcct	ctggtcacct	gaagaagacg	agaagctcct	240
caggtacatc	acgcagtatg	gccatgggtg	ctggagctct	gttctctaagc	ttgcaggctc	300
gcagaggtgt	gggaagagct	gcagattgag	gtggattaac	tacctgaggc	ctgatttgaa	360
gaggggcaca	ttctct					376

<210> 1941

<211> 169

<212> DNA

<213> *Eucalyptus grandis*

<400> 1941

aggaattgca	gcacctggaa	cagcaattga	gtggggcctt	atcatctgtc	aaggagaaga	60
aggagcaatg	gctcttgag	cagctggagc	gttcaagatt	acaggagcag	agggctatgc	120
tggagaatga	aactctgcgc	agacaggtcg	acgagcttag	aggtttctc		169

<210> 1942

<211> 188

<212> DNA

<213> *Eucalyptus grandis*

<400> 1942

cgagatctcc	gtctctgcgc	acgccgacgt	cgccctcctc	gtctctctca	ccaagggcaa	60
gctctctcag	taecgccaccg	actgttgcat	ggagaggatc	ctcgagcggt	atgagagata	120
ttcatatgca	gagagccagg	ttctcacaaa	caatgccgaa	accaatggga	actggacttt	180
ggaacatg						188

<210> 1943

<211> 321

<212> DNA

<213> *Eucalyptus grandis*

<400> 1943

ctctttctct	ctcaatcgga	agggtttctc	aaccgaatgg	acggcaacct	ctcattgcaa	60
atcggatata	atccgacatg	tctggacgag	atgaatgctt	cggttttcgag	ccaaaatgtt	120
ctcggtattca	ttccgggata	gatgttttga	acttaactaca	tgcacttgga	gtgtgaatgc	180
agctgtgtgaa	atttgtgcgt	gtgtcccttg	taaaatttgcg	atccgcaaga	caataagtac	240
ataatatttt	ggagctgtga	tgacataaaa	agaggaaggc	caccctttcc	tctctcatga	300
tcagaacttt	tgataatgtc	t				321

<210> 1944

<211> 905

<212> DNA

<213> *Eucalyptus grandis*

<400> 1944

ctagtggatc	ccaagtctcc	atcatcatga	tctccagcac	cggaagagtc	cacgagtaga	60
tcagccctcc	cacctcaacg	aagaagatgt	acgatcagta	tcagcaggcg	ctcgaggttg	120
atctctggag	ctctcactat	gagaagatgc	aagagaacct	gagggaagctg	aaggaggtga	180
acaagaagct	tcagctggag	gtcaggagga	gggtcgggga	aggactgaat	ggtagagctg	240
tatcggaatt	gtgcgggtctt	gagcaagata	tggaacaacg	cggttagcctg	atccgtgaac	300
gggaagtaca	gacgctcggc	aatcaaatcg	acaccgccaag	gaagaagaaa	aagaatgctg	360
gggaataaaa	caaaaagtctc	ctgcgaagact	ggaccaatct	gatcaagcat	ctgaggggag	420
acgacccgca	cttcggaatg	gtcgacaacg	gcaggggatta	cgaggctctg	atcggggtata	480
cagacgcgcg	cgccgcgcgt	cgcttgtaga	ccctgcgcct	gcaaccggac	cagcccaatc	540
ttactagcgg	aggaggatcg	gagatcacga	ccctaccctt	gctcgagtga	gacgaaggcg	600
tcggaaaccc	ttccgacgtc	ctcatattgt	ctattcattc	tgtctaaggg	ccgattccat	660
ctggaatcct	gacttcattg	gtatgtcgaa	gttttaggact	ttgttatgtc	atcctattca	720
gcagctaagt	ttgttcttat	cagaagctgt	tcctattatg	gaccgaggcg	gatttcctct	780
agggcatcat	gtgttttaag	acaagtctat	atataagact	actttaaaac	aatcgatga	840
gttggtgcaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaact	900
tcag						905

<210> 1945

<211> 337

<212> DNA

<213> *Eucalyptus grandis*

<400> 1945

gcggcaagga	gcaactaaat	gtaacactct	gattactagg	gacctctcat	tgtctttgga	60
tgccatttaa	atcacacagga	ggaatcacgt	ggctgaaaca	tttacttgtg	aagaactttt	120
acttagggga	gcattcaaaa	tgccaggaatg	ggctcatcaa	gaaggccctac	gagctctccg	180
tcctctcgga	catcgacatc	gcctcatca	tggtctcccc	ctccgaccgc	gtgagagctg	240
tttcgggaaa	aagaaggatc	gaggatgtct	tgacccggtt	cattaacctc	accgaccaag	300
aacggacact	ccatagatgtc	caggatcgcc	gcacacg			337

<210> 1946

<211> 301

<212> DNA

<213> *Eucalyptus grandis*

<400> 1946

caaaccttcc	cagggtttcc	atttccattt	ccctcataga	atgctccgtg	cccttcttat	60
ccctttttgg	gtactctctg	ttctcatggt	ccctttcataa	agttttctca	ttctcttaacc	120
aagacttgga	agagagagag	agatagagag	tttattagtg	gggtgagggtg	ttaaaaaatg	180
ggaagagggg	gggttcagct	gaagaggata	gagaaacaaa	taaacaggca	agtgaccttt	240
tccaagagaa	ggaattgggt	cctcaagaag	gcttatgagc	tctcgctcct	ctgtgatgct	300
g						301

<210> 1947

<211> 354

<212> DNA

<213> *Eucalyptus grandis*

<400> 1947

gccaagttagc	acccggtttg	ccccacatta	tctgtgatat	gtaaacgtgg	tgggcctctg	60
ttagctacaa	tatgatggcg	atcattttaa	cttttgcgta	atcatcagtg	ttctcaattt	120
gcaaaatcac	attaacggat	cttcgagcat	ggaaaagcatt	ttagagaggt	acgagagata	180
cacttatgctg	gagcgacagc	aagtggccac	tgattccctc	caagtgcagg	gaagtgtgct	240
gcttgaatac	cccaagctcg	tggttaggat	cgaaagcttg	cagaggaaca	taagaaactt	300
gagcggagaa	gagcttgatc	ccttgagctt	gagagagctg	cagtatttgg	agca	354

<210> 1948

<211> 456
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1948
 gtttctctctt caggagaaag caaggagctg tagaggaatt gaaaatgggt caagaagctc 60
 gaaaggggtcc atggacagaa caagaagatt tccaactggg gtgctttggt ggactttttg 120
 gagatcgccg atgggatttt atagcgaagg tatcagggtt gaaggtggcg ggagaaaata 180
 ataggatagt tggttttaa gctgggggt ttttgggaag gagctacttc taaccgccca 240
 gctttattcc aggattgaat agaaccagaa aaagctgcag actacgctgg gtttaactacc 300
 tgcattcctgg cctaaaaaga ggaagatga cactcaaga agagagactg gtgctcgaac 360
 ttcattccaa atggggaaat agatgggtcaa gaattgctcg caagctacca gggcgcaacgg 420
 acaatgagat aaagaactat tggaggactc atatga 456

<210> 1949
 <211> 382
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1949
 atttttcaac tcccccccc caccocgaat caaatcccat tccctctctc cctccctccc 60
 tttttttccc ccaattcttt gtgctggttt caagcaccca cgccccccaa tctccaacgc 120
 catcaatcaa gctcaagcac catcacctca agaagaagaa aggaagaaggaa gagagaaggaa 180
 cggagagacc gacagagggt cgcgcgcgca cgagacatgg gacgatcccc ttgctgcgag 240
 aaggcgcaaca ccaacaaggg cgcgtggacc aaggaaagagg accagcgccat catcgactac 300
 atccgcctcc acggcggaagg ttgctggcgc tccctcccca aatctgcggg gcttctcagg 360
 tgcggcaaga gctcgaggct ca 382

<210> 1950
 <211> 371
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1950
 gttgagcagg tacagtttct tgaagaaggt ttggaagtag agaacaagct cgagccagat 60
 cgcaaaatcc agttggcaca agacctcgga ttgcagccac gacaggtagc gatatgggtt 120
 cagaatcgct gtgcacgggt gaagacgaag cagctagaga aggaattatga aactttgcga 180
 gctttcttta acaccttgaa gtccagactac gacactctca tcaaggagcg gaatgatctg 240
 aaagccgagg ttcttaacct cagggaacag cgtcttcaca agggaaatga gaaggagagt 300
 tccagtcgt ccagcaaatc atctcaaggg ctattccaga acccaattgc tgattctggt 360
 tctgaggagc a 371

<210> 1951
 <211> 356
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1951
 aaaaagcata agctccctga ccataatcc ctagtatcga tggccagggt tcccagggtt 60
 gacaagagca acagcaagaa gacagtgaag aaggcgctt ggagtgcgga agaagaccag 120
 aaactgggtg cttatatcaa gagatattgc atttggaaat ggactcacat ggccgaaccc 180
 gccggttag cgagaacagg aaagagttgc cggcttcgat ggatgaacta tctgaggccc 240
 aaactcaagc atggaaacat caccgaagaa gagggaagaa tcatatttaa cttgcaacga 300
 gttcttggtg accgtttggc cagcatagcg agcagacttt cagggaaggac ggaaca 356

<210> 1952
 <211> 475
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1952

ctccccctct	ctggctctctg	ctctctctct	ctctctcagt	tctttctcgg	acgggtgtct	60
gtgcgtggct	tttgatcggc	catcaacctga	ggccgcgtct	gcaagcaagt	gaagaaggag	120
gacaaaggat	atggcgagag	agaagatcaa	gatcaagaag	atagacaagt	tgaaggcgag	180
gcaggtgacg	ttttctaaga	ggagacgagg	gcttttcaa	aaagccggag	agctgtcggt	240
ctgtgcgat	gccgaggtgc	ctgtcgtcat	tttctcggct	acggccaagc	tctttgagta	300
ctccagctcc	agcatgaagg	acatctctga	gaggtacacc	ctccaccaca	ataactctga	360
gaatatggac	caacctcttc	tcgagctgca	gctggagcat	agcaataaca	tgaggttaag	420
caaggaagtg	gcagaaaaga	gccatcgact	caggcagttg	aggggtgagg	atctct	475

<210> 1953

<211> 541

<212> DNA

<213> *Eucalyptus grandis*

<400> 1953

atcgcccccg	ttctctccct	ctctctccct	ctccccctta	acgtttcttg	ccctctctct	60
tgcttgga	aaaagatggg	aagaaagtgc	tcctcgctgtg	ggaaacatagg	ccataactca	120
aggacttgca	caacttccat	ggggcgacga	agtgccttgtg	ggctcgaagt	ctctcggtgtt	180
caacttgacc	tatctctctc	ttctctctct	tcctcatcag	catctagtgg	ttctgctcat	240
ctctatccac	ttgtcataaa	gaagagcctc	agcatggatc	gtctgtcttc	ttctcgcgcc	300
tcctcccgct	ctccatcttc	atccctctcc	tcgccaagag	ttctgtctga	tgaacactgc	360
aataagacct	ccctcgcata	tctctctgat	ggcctcgccg	ctagatccca	ggagaaaagg	420
aaaggaggtc	cgtggcggga	agaagagcat	cggacattct	taatggggct	agagaaagatg	480
gggaaaggcg	attggagagg	catctccagg	aactatgtga	ccacgagaac	cccaacccaa	540
g						541

<210> 1954

<211> 437

<212> DNA

<213> *Eucalyptus grandis*

<400> 1954

cgcggttgcc	gtcagataga	agagcatgta	ggaacccaaa	ctgcagttca	gatacgaagt	60
catgcccaaa	agttctctct	taaggttget	cgcggggtaa	gtggcgacag	cgaggggtgtg	120
attaaaccaa	ctgaataacc	tcctccaagg	ccaaagcgga	agccaatgca	tcctatatcca	180
cgcgaatctg	tcgattccaa	ggaggtgaaa	ctgtctctatc	aacaagagag	gtctccatct	240
ccaatctctt	cggttagcaga	tgaaaacact	ggatctctcta	cttcagttttt	gtctgctcct	300
ggttcagaca	tgctggggat	agcatctttg	catcaacaaa	acagatgctc	tttcccgact	360
tcagtaccca	ctgatgtacc	ctctattggt	ctagctgtaa	ltgagaaaga	aactgaaata	420
ttcaagaaga	agataa					437

<210> 1955

<211> 470

<212> DNA

<213> *Eucalyptus grandis*

<400> 1955

attcggtcac	gagttcaact	cgctgcctgc	ctcgtcgtcc	tcctctgctc	cctcgcgaat	60
ctccatcgcc	gagaactctg	ataaagcacc	ctctcggtat	ctgtcgagatg	gctctgctggg	120
tagatcccaa	gagaagaaga	aaggagttcc	atggacagag	gaggaacaca	gaacctctct	180
ggtggggctt	gagaagcttg	ggaaggggtga	ttggagaggg	atctctagga	gctatgtgac	240
cacaagaaca	ccggcccagg	ttgcaagtca	tgctcagaaa	tatttctctc	ggcaagttag	300
cttcaacaag	aaaaagcgcc	gctcgagcct	ctttgacatg	gttgatgtca	aaaccgcggc	360
gggtgacgt	ttaggcagtt	tgacggccaa	gcgagtgag	tcagttctca	atttgcaaaat	420
gggaaccttg	atgtctcaat	tgcaagttca	tgatgcccaga	accactcagc		470

<210> 1956

<211> 384

<212> DNA

<213> *Eucalyptus grandis*

<400> 1956
 ctgaaatttc gtcttcaagc catggaacaa caggcgcaac tacgcgatgc cctgaatgaa 60
 gcattgactg ctgagggtag acgatggaag cttgcgcagc cagagctcaa ctcggaattct 120
 catccttcaa agtgcatggt ttcaacagctt cctgtgagct cccaaatgtt ccagctccat 180
 cagatgcaac agcagcagca gtctcagcaa caaatcfaat cacagcagca aatgggtaac 240
 acaaccacaa agtcagagtc gaatcaatag gacgtgggtg gtccaaacaa tccggcgctc 300
 ggacaaactc cacttgtctc ggttcttcga caccctgcag tagttctcta gtgcattcat 360
 tcattcatta gtttttgcatt atgc 384

<210> 1957
 <211> 388
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1957
 gtttctcttt caggagaaa caggagagctg tagaggaatt gaaaatgggt caagaagtcc 60
 gaaaagggtc atggacagaa caagaagatt tccaactggt gtgctttgtt ggactttttg 120
 gagatcgccc atgggatttt atagcgaagg tatcagggtt gaaggtggcg ggagaaaaa 180
 ataggattga atagaaacgg aaaaagctgc agactacgct gggtttaact ctgcgactct 240
 gcctctaaac gagggaagat gacacctcaa gaagagagac ttggtgctcg acttcattcc 300
 aaatggggaa atagatggtc gagaattgct cgcaagctac caggggcgaac ggacaaatga 360
 ataaagaact attggaggac tcatatga 388

<210> 1958
 <211> 455
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1958
 tgacgatgtt tgtggaggag gaaagagacc ggaaggcct ttcttttgca catatgacgg 60
 ggaggaaaat ggagacgatg attatgatga gtatttacac caacctgaga agaaaaggcg 120
 attgtctatc gagcaagttc tgtacttgga gaagagcttt gagactgata acaagctgta 180
 accagataaaa aaagtccagc ttgcccaga aactcgggtt caacctcgct aagtgtgctat 240
 ttggttccaa aatcgaaagg caagatggaa aactaaagca atggagaagg atttcgataa 300
 attgcaagct agtttttaact gtttgaagtc tgattatgaa agtcttctca atgagaaagg 360
 gaaagctcaa gctgaggtta ttcatgtgac acaccagcta gagcaaaagg gcaacgggaat 420
 tctgaacctat tcgacatatt tgaacaattg cacac 455

<210> 1959
 <211> 965
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1959
 aagagaaaag atacaattccg ccgtggaccc aagaaggtca aagcccgctc tctgcacgat 60
 gatgggtagt agtagtagta ctacttatct tcogtgaggt ctctcgaatt aggggtttttc 120
 tgatttttcc caacccccca atatttatct ttcttttctt tccttttttt cgtctctctc 180
 cgagttccac tagaaaaact acgagggctt cgcacacagt cgcgtctcagt 240
 cggtagcgtt tactatctcg tctcaggttg tgtttcgctt ttatggggat gtctctcggc 300
 gggggcgctt gaaagattct ttagctcccg tagcttctgc tgccgggaatt ggtlsgggcg 360
 atcgtcaggt ttcttccagt taaagttcgg attttttaagg ggagcgaagg cgtttgagct 420
 ggtaaaagtc gaagcttttt gagttccggc gccagggttg tgtcttagag ataactggag 480
 gcgaaagggt cggttccggt ccggtcagca tccgctgact caggagatgg ttggggggtg 540
 ttggtggcgg cgggtgatgatt gattcatggg tagtaggact agagttggcg gtggtggaga 600
 tgatggcaga gttgtgaacg gcattgcccgt tctcgaatt acagactttg gaacacttga 660
 catgggataa gaaggaaact ccattcgttc ttctcgaatt acagactttg gaacacttga 720
 cgagttctct ggataccgca tagaagatgc agttgacctc agcagaaatc ctgtctctcaa 780
 tcagatgaata caagatgcc aggtccttgg ggcgtgatgc caatttggct cttgaaataa 840
 gtccctttca tctcagaca gaaatcttct tgtgaatatt gtggggtctc agactctatc 900
 tatgcataga gaatcacaat caaacttagt atcaataccc ggtgctcatc gtgagaactg 960
 gggggg 965

<210> 1960
 <211> 599
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1960
 gtccgggtccg gtctcctccc tcccttccct cctccttccct tctctctctc tctctctctc 60
 tctctcgccg tccaaccgta cggactctcg gttttgcccg gaaacggaaac ggagcggacc 120
 cgggtccctcg cgcgtcgccgg tgcgagagaa tgcctcccc cgcgcgcgcc acccccgcagc 180
 tcgcccgcga cgagagctcc ggccgcgacg ccgcccgcgg ggagatcatg ctgttcgggg 240
 tgcgggtgggt cgtggactcg atgaggaagt gcgtgagcct gaacaacctg tctcagtacc 300
 agcaccgcga ggacgcgaat ccgcccaacg ccagcggcgg gagcggcgcc aacaaggaaag 360
 aggcgcgcaa aggcctacga tcggccgacg acgcgcgcga caaccccggc ggtggccggc 420
 agcgcgaagag aggaagtccct tggacagagg aggagcacag cgtgttcttg ttgggattac 480
 agaaggtggg gaaaggagat tggagagcga tatccaggaa ctttgtgaag accccgcagc 540
 ccactcaggt cgcgcagcat gccagaaat atttctctgc ccgaagcaac ctcaatcgc 599

<210> 1961
 <211> 377
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1961
 ggagaaagtg gctctcgggt cgactgagcg gccgagaatt agacatcagc atagccagtc 60
 tatggacggg tcgacgagta ttaagccga gatccttatg tcgggttcag aggatgcac 120
 tgctgcagag gccaaagaag ccatgtctgc tgcgaagctt cctgagcttg cactgattga 180
 tccccagcgt gcaaaagaga tctgggcaaa cagacaatcg gctgcaaggt caaaggaaaag 240
 gaagatcgca tacaatagct agctagaacg gaaagtacaa actttacaaa ctgaagcaac 300
 aactttgtct gcacagctga ctctgctgca gagagacaca aatggtttga ctgctgagaa 360
 tagtgaattg aaactgc 377

<210> 1962
 <211> 317
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1962
 aagtaaaatc cctctcggcg tcccttttct tttatgtaca ttccaagaac agcgacagat 60
 aaggccccga gatctgcaag tcttcttcac actactcgct gatggctgat tctgaacatt 120
 ctctctctga tgacacttac gtggaactca gagaagagac aagtgaagaa tcaaaagctag 180
 atttctctga agatgaggag acgcttgtaa ttagaatgta caacctgggt ggagaaaggt 240
 ggtctctaatt tgctggtaga atcccaggga ggacagctga agaaatcgag aagtactgga 300
 attccagata ttcaaca 317

<210> 1963
 <211> 471
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1963
 ctcctctctc ataagtcata attcacaggc gcggcacaag gcacgaaaag ataaaaaaa 60
 aaacgatggc cggtgaggag ccctattctg ccgacacgaa ctcggaacat tctcgtgatg 120
 aagaaacgct gattccgagt tcttcogagg ctcttgagtc cgccctgggtt cctacttcc 180
 cgaccgctca tcatggttca aaatcagtg tcaattttga ggacgtttgt ggaggaggag 240
 acaccaatac tgcggcggag ccataacctc gacagattga tctgaaggaa gaagccgtcg 300
 aagaggacta cggcgacggg aactttcagc ctctggttaa gaagcggcgg ctatcgcccg 360
 accaagtcca tttctcgag aggcactttg aggtcgagaa caagctcgag ccogagagga 420
 agatccagct gcgcaaggac ctggccctcg agccgaggca ggtcgcgatc t 471

<210> 1964

<211> 372
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1964

tgacactgaa	gattcgaaga	agaaagagag	gcataattgtg	acttggtctc	aagaggaggaa	60
tgataatact	cggagacaaa	tcggtataca	tggaactcga	aactggctga	ttatcgcatc	120
aaagttcaag	gataaaaacga	cgagacaatg	cagaaggaggaa	tggtacacat	atttgaatct	180
tgacttcaag	aaaggggggt	ggtcaccocga	ggaagatgtg	cttttatgtg	agggtcaagaa	240
gattttcggc	aacagatgga	cagaaatagc	aaaggtgggt	tcaggcaggaa	ctgacaatgc	300
cgtaaaaaat	cggttcacaa	ccttgtgtaa	gaaaagagca	aggtacgaag	ccttagcgaa	360
agagaataca	ct					372

<210> 1965
 <211> 424
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1965

atgcaatttt	gagcgtcgcg	agtaagccgg	agcgaggagg	gagcgatggg	caggcagccg	60
tgctggcgca	agcttggggg	gaagaaaggg	ccgtggacgg	cggagaggga	ccggaagctg	120
gtcaacttca	tactcaccga	cggccaaatg	tgctggcggg	ccgtcccca	cgctcgctgg	180
ctccgcgcgt	gtggcaagag	ctgccgcctc	cgctggacca	actacctccg	cctccagatc	240
aagcgtggcc	tcctcaatga	agccgagcaa	agcctggtta	tcgatctcca	tgccactctc	300
ggcaatagg	ggtccaaaat	agcagctaga	ctaccgggaa	gaacggagaa	cgagatcaaa	360
aaccactgga	acacccatat	caagaagaag	ctcattagga	tgggcattga	tccagtcact	420
caca						424

<210> 1966
 <211> 427
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1966

cccggtcctc	gctcgtccaa	tcggcgcgctc	gagaggaaga	aaggtaacc	atggacggag	60
gaagagcatc	gaagggtttt	aattggtctc	cagaaattgg	gtaaaaggaga	ctggcgaggag	120
atagctcgtg	acttttgtac	tacaaggact	cctactcaag	tggaagacca	tgcccagaag	180
tattatatcc	gcgcagagtaa	tgctggccga	agaaaagggc	gctccagcct	ttttgacatg	240
gctccagata	tggtttgtct	tccttatgat	gttgctctctg	caatattcat	gcactccggt	300
caaatatccg	gctcgtgcac	gttttaagat	gttttcttag	ctcatgctga	catatgcttt	360
aaccatgcac	tagtgatgat	tacatgataa	ggggcattcc	tcttagacct	ttgggacaca	420
tcaaatg						427

<210> 1967
 <211> 373
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1967

cttgaaactt	ctccgctctt	ctcttctctc	tcttgaaagg	aaggatgaga	aaacctgtgt	60
gtgacaagca	agacacaaac	aaaggagcat	ggtcgaagca	agaagaccag	aagctcatcg	120
actacattcg	caagcacggc	gaaggatggt	ggcgaaactc	tcctaaaggct	gcgggtctcc	180
tcggttgccg	gaagagttgt	aggctaagat	ggataaaacta	tttgccggcct	gacctcaaaa	240
gaggcaactt	tgctgaggat	gaagaggatc	ttatcatcaa	gcttcatgct	ctcctaggca	300
accgatggtc	gctaattgct	gggagattgc	ccggacggag	agacaatgaa	gtgaagaact	360
attggaactc	aca					373

<210> 1968
 <211> 197
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1968
 ggtcgcccgga ggaagacgag aagctcttca actacatcac ccgattcggc gtcggctgct 60
 ggagctctgt accgaagctc gccggactcc agagatgtgg aaagagtgc aggttgaggt 120
 ggataaacta cctgagggct gacctcaaga gggggatggt ctctcaagaa gaggaggatc 180
 tcatgtctag tctccac 197

<210> 1969
 <211> 365
 <212> DNA
 <213> Pinus radiata

<400> 1969
 gcaaaatctt atttgggttc ccttacagaa actatacagt ccttgaatgc tgagcttgaa 60
 agaactagat cggagttggt tgaagcaaaag aagagagagg aagagattat tccaaaagaa 120
 gctgaaagag tagagaagaa taagagagaa gtggaaaatc tggaaactca tcttctgcaa 180
 actactcgag aagctgggag agctaaaactg gaactagaga ctgcttatga agaggtgcag 240
 agcgcaagac ttgaaactgc gcaattgagg gctgctttgg aagccacaga gggaaaattt 300
 gaagcaatgc tgagtggagac taggttggag gcagagcatg tcaaaaggagc tattgagaag 360
 tataa 365

<210> 1970
 <211> 260
 <212> DNA
 <213> Pinus radiata

<400> 1970
 gaaatatttg tgactcaaat agagcaactt caaagaaaag aacggatggt tagcgaagag 60
 aataattttc tccgaaagcg gattgtcgat cccattccg ttttgacaac tctgcgaagt 120
 ggatctggaa gccctcaaaag aagtgaagtc gaggactaac tgggttatgag accgccaggt 180
 tcaaaagctg attttctttt taatagtctt cattgataat cactgtatcc atatctttgt 240
 tattaattta ttatgaaagt 260

<210> 1971
 <211> 332
 <212> DNA
 <213> Pinus radiata

<400> 1971
 tctctctggt gtggggggca ctcaaaatgg ggaagacgaa gatggagatt aaacgcattc 60
 aaaaaccctag ccgcccgcag gttactttct cgaacacgaa gaacggattg ctaaaaaagg 120
 cattcgagct ttctgtttct tgcgatgctg aagtcgccct gatcattttc tcggaaaactg 180
 ccaagatctg cgagtttgca agccacgacg acatggcaac aatactggaa aaatactgaa 240
 tatacacgga aacacatgga aacatggagt cctcgctggt ccaaaagcgtg aagattgggtg 300
 aatcacaaact caaagcgttg cgtgagaaga tg 332

<210> 1972
 <211> 413
 <212> DNA
 <213> Pinus radiata

<400> 1972
 cttcgagggtg ctaattggctg cacaatacct tcaattggat tgacaagcat agaacgcgtg 60
 gaagttcaga ctcaactggt catgagacct ccacatgccg cagagatgga cgacaacttt 120
 atggatgttg acaacgtgcc actatctgga tgatgttttt ctgtttctgt tacataaatat 180
 ggccactgat gacacatac ttatatttgg tatttgcctt aaaaatgact ctttctttca 240
 ctgacttttg atggactgta tgatagttga tttttggtcc tcaactctta gcaaatgggtt 300
 atgggtacct gttttggccc gaggccttg aggatctact ctctatatgt tactgtttta 360
 ctttttacct ttgtgctcac tgactcatat gatggacttg cccacatatg atg 413

<210> 1973

<211> 521
 <212> DNA
 <213> Pinus radiata

<400> 1973

agaagatggg	agcttgggga	tctgtgaaag	atctctctct	gcggctcaag	gtatgcctat	60
ggatcacag	tctcaaaagt	ttgtgcatgg	tgaactctta	tctagtgggt	atttgatccg	120
accctgtgaa	ggcagaggag	catttagtcat	catgggtgat	cacaggaact	tagagggttc	180
aagtgtccct	gaagcacttc	gtcccttata	tgagtcatct	acattctttg	cacagaagat	240
gacagttag	gcttcttatt	atcttcaagg	ttaaagttaa	ccggaataa	tttctctatc	300
aaaaaaact	caacagccat	gtaattgtacg	gtcatcacgt	caacggcttt	gcagaggctt	360
taattagggc	gtcaacacat	tacctgatga	tggtgtggat	tcaattgtcca	aagatggggt	420
gggggatgtc	actatttgtg	taaagtcttt	gtcaaatgtc	cgaaacccaa	tgtcatcgct	480
aaatagccta	tgttcaacag	acatgggcat	cttgagttaa	a		521

<210> 1974
 <211> 461
 <212> DNA
 <213> Pinus radiata

<400> 1974

gaaaaatgaaa	gccttcgagc	tcgtttaagg	catatgaatg	gcgatgacat	caattcggtg	60
aagcttcccg	aactcttcca	tctcgaacag	cagcttgaaa	cggccgcaac	ccaagttcga	120
agaagaagag	atcaagtttt	agacaacgaa	aaaatcaagc	gaaggaaaca	gatgcggcgt	180
aaggaaagag	agaaactcat	tcttcacgaa	atgcttgacc	agaccatgg	acaaatggag	240
gaggataacg	ctcagattaa	tttcttattt	tgccaacatc	taaatagatc	ggataactact	300
ttccctgcac	cactactccg	cctgcaacca	aatcagccaa	atttgacgga	tattggatct	360
taattactga	acggaccatc	tgtgtgcac	ataatgagaa	ggtcatggac	ttctcagtaa	420
cagtcaatta	tgaaaattcg	aggtttgtga	ggaaaaaaa	a		461

<210> 1975
 <211> 499
 <212> DNA
 <213> Pinus radiata

<400> 1975

tgagccccc	ggtggagcac	cgacctttca	gcccacatga	agacgccacc	atcatacaag	60
cccattgcgc	gcattggcaac	aagtgggcta	cgattgccc	cctcctaccc	ggcgccacgc	120
accaacgcat	caagaaccac	tggaaactcga	ctctgcgacg	tgcctatcat	ggcgagaaag	180
accagagcaa	cgggctagct	gtgaaacttgg	agtggcgacg	tgaggacaaa	gaaacgatga	240
ctccgatgac	acctgtcaca	gccacggcaa	cggcaacggc	aacggcaatg	ccagtggctt	300
tagtgttccc	aacggctgca	gacaacgtca	ggaagcggag	caacagtagt	tgacggcgta	360
atgacaatcc	aggagatgoc	gaggtcgaa	cctgtaggct	taagaggctc	aatttttctg	420
atccccatc	tagttctgat	aatatttaata	ataataacaa	taatgaagaa	gctgttagtg	480
gccattgcaa	ttcggccgc					499

<210> 1976
 <211> 419
 <212> DNA
 <213> Pinus radiata

<400> 1976

ctcagagctc	gacaaaaact	acatacatc	gtctgtcatc	cctcccagaa	atacctagtg	60
agggcgatcg	aggtcgaaag	gggcatttta	cgccattgaa	gcggtgtgca	tagggtaaac	120
tctgagaact	gattgtgtct	tccttcggag	ggagaggggt	agcgaggttc	agaaagagag	180
agaaagagaa	agttagtctta	agggactgtt	taaaaatggg	cgaggtccag	tccagctgag	240
aagtagagaa	aacaaaaata	atcgtcaagt	aacgttttct	aagagacgga	atgggctgat	300
aaagaaaggg	tcagagctgt	caatcctgtg	tgatgcggaa	gtggcttaa	ttgtctcttc	360
caacaaaggc	aaactctatg	agttctctcc	ttccagtatg	accaagattt	tggaaagat	419

<210> 1977

<211> 459
 <212> DNA
 <213> Pinus radiata

<400> 1977
 gcaagctggc ctcacgcgtt gcgggaagag ttgcaggctt cgggtggatca actacttgag 60
 accgagcttg aagcgcaggca cattctctcc gcaggaagaa aatctcattg ttgaactgca 120
 ttcagtcctc ggggaacaggt ggtctcaaat agcaacacac ctgcccggaa gaactgataa 180
 cgagatcaag aacctctgga actcgtgcac taaaaagaag cttaggcaac gaggcataga 240
 tcttaaacag cacagccctc tcagcgaggt gaatgcccag gcaggggatt ctaagaacga 300
 taacagcaat aaagaagtgc aaactcaggc agccatggac gaatctcatg ttctcgagg 360
 gaacgaattc aagcatctga atgcaattcc tagggctgat acggccaatc ctaaatctct 420
 tcatgttccc gttgaggaca acactttgat tgctagcga 459

<210> 1978
 <211> 331
 <212> DNA
 <213> Pinus radiata

<400> 1978
 ggagagtgca ccacgcagat ccacgcagtc gaagagaagaa agaaatctgc agggaggagt 60
 gaaaatgagg tgacacacgat gccaggtctt cccattttcc tccaaaccaa aagttaaaaa 120
 gggctctctg tcgctcgagg aagatgagaa actcatcaat tatatgatga agaagggcct 180
 tctcggctgc tctctgagct atgtggccaa gcagatttgt ctgcagagat gcggaaagag 240
 ttgcagactg agatggacta actacttacg tcttggcctt aagcggggtg caattctgcg 300
 tgaggaggag caattgatca tacacttaca g 331

<210> 1979
 <211> 375
 <212> DNA
 <213> Pinus radiata

<400> 1979
 gttctatcaa acttcttctc caccataccc atttccatta gacggctgaa ttctcagatc 60
 caatttgctc cagccctctc gcgacagaag aagatgggaa gagcaacctg ttgtgacaag 120
 gcaaatgtca aaaaaggacc ttggtcacca gaagaagaca caaaactcaa ggcgtttatt 180
 gaacagcatg gcaactgggtg caattggatt gctcttccac agaaagctgg tctgaaaagg 240
 tgtggaaaaga gctgcaggct tagatggltg aactatttga gcccagatat aaggcatggt 300
 ggtttctcag aagatgaaga taacatcatt tgtagcctct atgcaagcat tgggaagcatg 360
 gtgtctataa ttgca 375

<210> 1980
 <211> 749
 <212> DNA
 <213> Pinus radiata

<400> 1980
 gaggcttcac cgccattatt ggggtttcaat tcgatcttga ttgcccagag acgatgtgaa 60
 ttaccattct gtgggcacaa gcgagagagg agggagaatg tgaggggaaa gaccagcatg 120
 aaaaggatcg agaagcagac gagcaggcag gttacgtttt ctaagccagc gaatgggtta 180
 ctgaagaaga cttatgagct ctcctgtgctc tgccgatgcc aagtgaggact tataattttc 240
 tcaccaagag ggaactata tgaattcgcc agtcccagca tggaggagat ttgggaaaag 300
 tataaaaaac gttcgaagga aatggcatg gctcagacaa cgaagagcga agatactcag 360
 tattccaaac attccaaaca aaagctcgca aatatggaag aacagattag gattcttgaa 420
 tcaacccaaa gaaagatgtt ggggggaaggg ttggaatcgt gttcaatggc agaataaatt 480
 aagttagaga gccaaagctg acgagagatt agccatatac gggctcgaaa gacgggaaata 540
 ttggttgacc aaatagaatg tcttaaaagg aaggaacgct tcttaagcga ggagaagccc 600
 ttactcagta gaaagtggtt tgatcgtcaa tccgtggagc gttccgggtc aacatcatct 660
 tcaattggat tgggaagcat cgagcagatc gaagttgaga cacaactggt tataagaccg 720
 ccaaatgcac aggatcactg ttctgtaaa 749

<210> 1981
 <211> 339
 <212> DNA
 <213> *Pinus radiata*

<400> 1981
 cttggctggg gaagacaacc cgctgcatta cggacattta gccagagatt gtgcaaggggt 60
 ttcaatgagg caggttaattggt cttcacagat gatggatgggt ctttgatggg taacgacgga 120
 atggaggatg taactattct cgtcaattca tctccaaagca aactgttcgg tcaacagttt 180
 gctctctccg atgggcttcc tgctcttggt gggggcatcc tatgtgccaa ggtctctatg 240
 ctattacaga atgttctctc agcattgctt gttcgtttct tgcgagaaca tcgatcagaa 300
 tgggcagata gtaatttga tgccatttca gcagcctct 339

<210> 1982
 <211> 373
 <212> DNA
 <213> *Pinus radiata*

<400> 1982
 ggattccgac ccttcggcgt aaagctgctt catttctgtg tgtattgaag atggggagat 60
 ctccctgctg tgaaaaagct catacaaaaca aaggggctgt gccaaagaa gaggacgatc 120
 gccctatcgc ccacattcga actcacggcg aaggttgctg gcgctcgctt cccaaggccg 180
 cagggtcgat gcgctcgagg aagagctgca ggctccgatg gataaactac ctgcgtcctg 240
 atctgaagcg tggaaacttc tcagaagaag aagacgaact catcatcaa ctccactccc 300
 tactcggcaa caagtggctt cttattgcag gcagattgcc cgggcggagc gacaacgaga 360
 taaagaacta ctg 373

<210> 1983
 <211> 404
 <212> DNA
 <213> *Pinus radiata*

<400> 1983
 aggcataaag tggattattt gagaacttga ctgtggctga gattttcagg gatggaccgt 60
 tcaaaactcty cgactggaga agaagatgta ctgtcaagat gcagggaagaa aaaaagcttc 120
 atgaagctgg caattgagaa caggatataaa ctacgaacag ctcatgtggc ttacatggat 180
 tctcttaggc gtaatgggac cggctctcgg ctttttgctg aaggcgaaac gatgtcggag 240
 tcttctctat ccacatcacc catagggact tctgaacttg ctgtgtgctt gctcgagaaa 300
 tccgtatccc catctccatt tccattctca tccctctcac ttctcgaacc tcaaaagccc 360
 cgttcagaga gacgagaatc tcgatctcca ctcgacagct tctc 404

<210> 1984
 <211> 332
 <212> DNA
 <213> *Pinus radiata*

<400> 1984
 cggacggctt ggttcaaaaac tctcgtgaaa gaaaaaaagg cgttccttgg acggaagaag 60
 aacataaaat gtttttatta gggcttcaca aattgggaaa aggcgactgg agaggatatt 120
 ccagaaaactt tgcactctcc agaactccta ctcaagttgc tagccacgca caaaaatatt 180
 ttcttaggca gagtaatttg aacaaaagga aacgaaggtc gagcctgttc gatatatcca 240
 ctgattcgat ggaagattgc tatcaaggaa tcccggagct gtcaccgggt atgcacgatc 300
 tcagctctggg ccagaattca tctctgacct ct 332

<210> 1985
 <211> 526
 <212> DNA
 <213> *Pinus radiata*

<400> 1985
 ctctctctcc gtctccaaac ccaagctaa gaaaggctc tggctgcctg agggagatga 60

taaactc	aatcatc	tgaaaaa	ccaggggt	tggagc	tcgccaa	120
agctggt	cagagat	gaaaaag	taggctg	tggatta	atttaag	180
cgacctc	cgcggtg	tttccccc	ggaaga	ttgatcat	acttgcat	240
catctcg	aacaggt	ctcagatt	agcccc	cccgagc	cggaaca	300
gatcaaga	ttctgga	cctgcata	gaagaagt	aaacacct	cggtctcc	360
caacaac	aaatctat	ctgcacct	tctgacct	accatga	catcgat	420
gcccttt	gaatcgt	ccgagcc	ggaggtc	gcaaca	atcagcc	480
gaatgct	aatcatg	tgcccact	agaaaa	gttttg		526

<210> 1986

<211> 366

<212> DNA

<213> Pinus radiata

<400> 1986

atcagact	catcaaac	aactggag	gtgaagg	agtgcg	ttaaat	60
gcagagct	ccgtatt	aagaggcg	ctttacg	gtcggcac	aaccagag	120
gagagaaa	atgggtagg	ctccctcg	cgaaaagt	gggtcaag	aggcccc	180
gacgcggag	gaagatcaa	agctcctc	ttacatac	gagcacgc	atggcagct	240
gagggctct	cctcagaaa	ctgggtgt	aagatcg	aaaagctg	gattgcgt	300
gactaact	ctaagacc	atatcaag	gggaaagt	aacccacg	aagaacag	360
attat						366

<210> 1987

<211> 476

<212> DNA

<213> Pinus radiata

<400> 1987

ccgaactc	cgctgtg	aaatggg	aaaaaagg	ccctggac	ctgaaga	60
tcaaatact	atctctata	tcaacaag	tggtcatg	aattggcg	cgctgccaa	120
gcaagcag	cttatgc	gtgaaag	ttgtcgct	cggtggca	actatctg	180
acctgaca	aaacgtgg	acttcagt	caaggga	cagactat	ttcactct	240
tcaaatc	gggaaccg	ggtcagct	tgcctcac	ctcccgg	gaacagat	300
tgagataa	aatgtatg	acactcatt	gaaaaaac	ctcctgca	ttggggtag	360
cccgata	cacgcgct	gaggatac	tgatctaa	gtttacac	ctgtgaat	420
ccgggac	catggcg	aggcgat	tcagctcca	agccatgt	gcgttt	476

<210> 1988

<211> 151

<212> DNA

<213> Pinus radiata

<400> 1988

ggacacct	ggaagat	attcttat	cctatata	aaggaat	catggaa	60
ggcttgac	gccgaaca	gcaggact	gccgatgc	gaagagt	cgactgc	120
ggcaaa	tctgagac	aacataaa	g			151

<210> 1989

<211> 461

<212> DNA

<213> Pinus radiata

<400> 1989

gtaaccac	aggagtt	ttctgtcc	cccccta	tctccact	acagatct	60
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tttttct	ttgaccac	agcaggtt	acaagctt	acaaagg	cactgaaa	180
gaaggatt	tactgcag	tatgttaa	tttatttt	ataaacg	ggaactgg	240
aagaagca	gccaaact	cctgctgc	aaccatct	ctcctccc	gagacacc	300
caaacact	gtttac	tgggcag	ctttccag	atattat	ccaggtgc	360
ccccacct	tctgtc	tttcttca	cagtggag	tgcacca	ccacatcc	420

acatgtgggg	tggacagccg	ttgatgccac	cttatgggac	t	461	
<210>	1990					
<211>	418					
<212>	DNA					
<213>	Pinus radiata					
<400>	1990					
gtagattcct	tgtctatcaa	gaggggtgcac	aaggttttgt	tttaagaaca	cagacaggca	60
gacagacaga	gacgtgatca	tggggcgagg	gaagattgaa	ataaagaaaa	tagatgatgt	120
aacgagcaga	caggttaactt	tctcaaaagc	caagatgggg	atattcaaga	aagccacaga	180
gctgtctgtt	ttatgcgatg	cagaggtggc	tgttctctatc	ttttcaaaac	cgggaaggct	240
ctacgactat	gctagtcca	ggtgtatgga	acgaactatt	gagagatatg	aaaaatgtac	300
caaaagcaatt	aattgcccaa	catcagatcc	cattgtcgag	aataagagcc	caattcagga	360
aggcattgaa	atattgaggg	agaaacttcg	tgcatcaca	agattgcaaa	gaaatctg	418
<210>	1991					
<211>	321					
<212>	DNA					
<213>	Pinus radiata					
<400>	1991					
actaaagcag	ctataaagag	actgcagctc	cagataatgg	ttgcattcca	ggcagttgat	60
acaactctcg	cagcaattct	gaaattgaga	gaagatgaac	tctatcctca	actcgtggag	120
ctatctaaa	ggctaaatgc	gatgtggagg	gccatgtatg	aatgccacca	ggctcaaaat	180
catattgtcc	aacaggtgag	gcatttgggc	aatctggcaa	gcgcagaggg	cacaagtagt	240
taccatcagc	aggcaaccat	tcaattggaa	gctcaggtga	ctgcttggtg	tgacagtttt	300
tgtagaatga	taacagacca	g				321
<210>	1992					
<211>	390					
<212>	DNA					
<213>	Pinus radiata					
<400>	1992					
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ttggtgtaga	aggcagagat	ttactttgtt	tctgcttgtt	tgtcgggtct	caccttcacc	120
ttcagacaac	attttgtctga	accgcggaac	tagctcttga	aattatgaaa	cccactctaa	180
tgcgagggga	ttgggtggatg	ttagcagtg	tcacagagcg	gtagagctag	ggaaaaatcca	240
tatacaacta	catcacacaga	taccattat	cagccatggg	cgctccgaag	caaaaatgga	300
catcagaaga	agaaggtgct	ctgcgagcgg	gcgtggagaa	gtatggcgcc	ggcaagtggc	360
agaccattct	caaggaccac	gagttcgctt				390
<210>	1993					
<211>	476					
<212>	DNA					
<213>	Pinus radiata					
<400>	1993					
gcagtggtca	tatggatggg	ggatccggag	aggaccaaga	tggcccgcat	caagatcacg	60
atcacgatca	cgatcatgat	cacgagcagc	agcagacgcg	gaggaaaacgt	taccacagac	120
acactgtctg	tcaaattcag	gagatggaag	cgttgttttaa	ggagtgtcca	catcctgatg	180
acaaacaaag	gcagcggctc	agcattgaat	tgggccttaa	gcgcggcgag	gtgaaattct	240
ggttttcaaaa	tggcgctact	cagatgaagg	ctcaacagga	tcgctcagac	aacgccattc	300
tcctgtcaga	gaatgaaaaat	ctgcggaaac	agaacgtagc	actccgagaa	gcaattaaaa	360
atggtgcttg	tccaaactgc	ggaggttcta	catcgctggg	agagatgcct	ggattcgagc	420
aacaccattt	ccgtatagag	aatacgcgct	taaaaggagg	gcttgatcga	gtgtct	476
<210>	1994					
<211>	429					
<212>	DNA					

<213> Pinus radiata

<400> 1994

gataaactga	gtgagcaaaa	ttactcagaa	agaaggaaga	gcagaaacaat	tcgcccggag	60
gaatgggttg	cacacaagg	caacgcaga	gggaatggga	agggaaaggc	gtcccctcga	120
atttcctcaag	gcgaagtcta	agaaaaggc	lctggtcacc	ggatgaagat	atagaactta	180
ccacctatat	catgagaaa	ggcctcatgg	gctgctggaa	ctatatcgcc	aagcaggctg	240
gtctgcagag	atgtggaaa	agtgcaggg	tgagatggat	taactacttg	cgacctggct	300
ttaaacgttg	tgcaatttca	ccccaagaag	agcgactgat	aatacagta	caatccagtc	360
tcggtaacag	gtgggtctca	atcgccggac	atttaccggg	acgcacagac	aatgaggtca	420
agaattact						429

<210> 1995

<211> 321

<212> DNA

<213> Pinus radiata

<400> 1995

agcgcgtctc	tgtgaaaatg	gggagatctc	cgtgctgtga	gaaggctcac	accaacaaag	60
gtgctcggac	ccaacaagaa	gataccgcc	ttgtcgccca	cattcgagcc	catggggcaag	120
gcggctggag	ctcgctlccc	aaggcagcag	gactcgtgcg	ctgtgggaag	agttgcaggc	180
agcgatggat	aaactactct	catccagatc	tgaagcggag	taacttttca	gagggaagaag	240
atgaaactcat	cgtcagaact	cattcgctcc	tgggaaacaa	gtggtctctt	attgcggggga	300
gattgccggg	gaggacagac	a				321

<210> 1996

<211> 402

<212> DNA

<213> Pinus radiata

<400> 1996

ccgcctccta	cccgggcgca	ccgacaacgc	tatcaagaac	cactggaact	cgactctgcg	60
acgtcgctat	catggcgaga	aagaccagag	caacgggcta	cgtgtgaact	tgagatcgcc	120
agctgaggag	aaagaaacga	tgactccgat	gacacctgtc	acagccacgg	caacggcaac	180
ggcaacggca	atgcagtggt	ctttagtgtt	cccaacggct	gcagacaacg	tcagggaagc	240
gagcaaacgt	agctgcagcg	ctaagtacaa	tccaggagat	gccagggctg	aatcctgtag	300
gcttaagag	ctcaattttt	ctgaatcccc	atctagtctt	gaaaatatta	ataataataa	360
caataaagtga	gaagctgtta	gtggccattg	caattcgccc	gc		402

<210> 1997

<211> 375

<212> DNA

<213> Pinus radiata

<400> 1997

ttagcttgca	gaaaatgagg	tgcaaaaacag	ggcaggcaca	aggcgtattg	gaagtgtgaag	60
gcactcaccc	tgcrctcttc	aaaccaaagt	taagaaaagg	tctctggtca	cctgttgaag	120
ataaccagat	caccaactat	atcctgagaa	gaggcctcgt	cggtcgtctg	aactatgtgg	180
ccaagcaggg	tggtctgcga	agaacccggaa	aaagtgtgag	gctgagatgg	attaactact	240
tcgcctctgt	ccttaaacgt	catccaattt	cacggccaaga	agagcagctc	atcatagaat	300
tacaatccat	tctcggtaac	aggtgggtctc	aaattgcggc	acagttgccg	ggacgcacgg	360
acattgagat	caaga					375

<210> 1998

<211> 466

<212> DNA

<213> Pinus radiata

<400> 1998

acaacagctt	gaatctagtc	gaataaagct	gaacaaaatt	gaacaagagc	ttgagcgagt	60
gaagcaacag	ggaatttcca	tcaatggaca	tttgggcgat	cataatggat	caggggctgc	120

tgcatttgat	atggaatatg	gccgttgggt	tgaagaacaa	aacagacaag	cccgtgagct	180
caggggcttc	ttacaagcac	acctgacaga	tagcgaaact	tgtgttctcg	tggataaatgc	240
tatagctcat	tatgatgaac	tctttcgtat	gaagggtgct	gtctccaaag	tggatgtttt	300
ccatcttatg	tcaggcatgt	ggaaaactcc	tactgagcgt	tggttttatgt	ggatgggagg	360
ttttcggcca	tcagagcttc	tgaagattct	tactccacaa	attgagcctt	taacagaaca	420
gcaatcattc	gcagtatcta	gcttgaacct	gtcatcacag	caggca		466

<210> 1999

<211> 243

<212> DNA

<213> Pinus radiata

<400> 1999

ctgagagtta	agtgattggt	gggaggggaa	agagaaaaaa	gaggagatca	agaatggtga	60
ggggaaaaat	ccagatgaag	aggattgaga	atacggccag	caggcgaggtt	acattttcca	120
agcgtagaaa	tggtattgctg	aagaaagctt	acgagctctc	gggtctctcg	gatgcagaag	180
ttggacttat	gattttctcg	ccaggaggaa	agctctatga	attgcaccaat	accagcatgg	240
aga						243

<210> 2000

<211> 642

<212> DNA

<213> Pinus radiata

<400> 2000

cgagcgga	agactgaaat	attggtgact	gaaatagagc	aacttcaaag	aaaggaatgg	60
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aaaaactcctg	gaagtgaatc	gggaagcgc	caaaaacgtg	aagtcgagac	gcaactgggtt	180
atgagaccgc	catgtacaaa	tgctcatttt	cttattaata	gttctcattg	ataatcaatg	240
tattcgtaac	tggtgttatca	atttattatg	aaaattttat	attaataaaa	ggttaaagctg	300
cttctcatat	cgacactaat	tgctcaccac	gtccaaaaaa	aggctcttgc	caagtgaact	360
aaatgttttt	tgaacccaag	tctgtcttcc	aaactcagta	tgtaagcttg	ctatgaatac	420
atactttaaa	gggttttgat	tagcattacg	agcggaggtt	tctctattca	tccgatgagc	480
atgaagagtg	aggagtataa	tattgaagca	tggtggagaat	ttatgtttgc	ataatactct	540
acgtgtatat	atgtgatgtt	ttatatatat	ataataatc	gattttgaatc		600
tataaaattt	taaaattata	atttagttta	aaaaaaaaaa	aa		642

<210> 2001

<211> 485

<212> DNA

<213> Eucalyptus grandis

<400> 2001

gagagagctc	gcaaacctgcg	cgctccgcgt	cgccgatcgc	cgaggagaatc	gccgcggcgc	60
agatattggg	aaccagaagc	tgaagtggac	gaaggaggag	gaggaggcgc	tcctcgccgcg	120
aatcgccaag	cacggcgccg	gcaagtggaa	gaacatctct	aaggaccgcc	aattcgccccc	180
cgccctcgct	aatcgctcca	acatcgacct	caaggacaag	tggtcgtaact	tgagcgtcgg	240
tactttcgga	caagggttcta	gagataaaca	aaggctgtca	aaagtgaaaa	gtctgatggc	300
cgctcctcag	tcacgtaccg	tgctctctaa	tcacaaagct	catgctgcat	ctactgatgt	360
tgcatgtgtc	aattctctca	atagctttca	agatggcaaa	aattattcac	tggtgggtatc	420
tgtgctcctt	ttctctttca	gtaacggcaa	tcttttttac	ttctatcctt	tggtatcctt	480
tctgt						485

<210> 2002

<211> 356

<212> DNA

<213> Eucalyptus grandis

<400> 2002

cgactcgta	gtcagctcgt	gcaactcctg	caattcatga	ttattttctc	cgacttcggg	60
cccttagttc	cctctggctt	gcccgtccaa	gagaatgaag	aggtcatggt	ctatgcaggc	120

tgacatgtac	attgggtgac	tttaggaagc	tatcagtttt	gaagtagttt	cggacccaga	180
actgggttat	ttctagtttt	cttcattttt	tttttttttt	gctataaata	tttttttttt	240
cttagacacg	aagtccacga	gaattgatgt	atggatagct	aagctatcat	aggttgggat	300
tgcattgttc	tcattgaaga	tactgtctaat	tgtgtaggca	ctctctgtca	ttagtct	356

<210> 2003

<211> 713

<212> DNA

<213> *Eucalyptus grandis*

<400> 2003

tctccatcca	aaattccacc	ttcttccctt	cttccctttt	cccttcttct	tccttctgca	60
ccgaaggaag	cccccgcttc	gcaagccacc	tctcggtaaa	gttctgtctt	ttttgggtcg	120
cggaattctt	ggctcgatga	tggcttcgag	gaaggaggtg	gatcggatca	agggaccgtg	180
gagcccgag	gaggacgagg	ccctccgctt	cttgggtcag	aagcacggcc	cccggaactg	240
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caaccagctc	ttccccgagg	tggagccacc	ggccttcacc	ccggaggagg	acgacatcat	360
cgctcccgcc	cagcccggtt	tcgggaacaa	gtggggcacc	atcgcccgcc	tcctctccgg	420
cgccaccgac	aatgccatca	agaaaccactg	gaactccacc	ctcaagcgca	agtgtctccc	480
cccgctcttc	ccgctcgccg	aggaaggaaa	caacaggggc	ttcgacgctg	cccgggggta	540
cgacggggag	ttgagcccg	gggagcggcc	ggcgaagcgg	tcggcctccg	ccggcccttg	600
cttagagcccc	ggcagccggt	ccggatccgg	catgagcgac	tcacagctgc	acttcgtgta	660
ccggcccgct	gcgaagaccg	gccccgtggt	gcccccgagc	gtcgaaggcg	cgg	713

<210> 2004

<211> 341

<212> DNA

<213> *Eucalyptus grandis*

<400> 2004

acaggttgct	caattaaagag	ttgagaattc	tactttactg	aaacgtctct	cggacataag	60
ccagaagtac	aattgtagag	ctgttgacaa	cagagttttg	aaagctgatg	tcgaaacctt	120
gagagcaaat	gtgaagtga	ctgaagagac	ggttaaaaga	gtaacccgac	tgaacctaat	180
gtgcatgtg	atgtcccgca	tgtcttctgt	gggtgtgcca	ccatttgatg	gtagtccctt	240
tgatacatca	cgcgatgctg	cagtctcctg	gcgagatgac	ccaaagcacc	aatctcatca	300
aaccaattct	agtaacctcg	catcatctgc	tgacgatatg	a		341

<210> 2005

<211> 1403

<212> DNA

<213> *Eucalyptus grandis*

<400> 2005

ttctttcttc	accctctgtg	catgaatttt	cttgggccat	gctcatgcat	tctctctctc	60
ttcttctatc	accatcgtca	tcgtctctga	ctttgatggg	ttggcgaggg	ggggagctga	120
gggagagggg	gaggagagga	gagagggagc	gctgtgctgt	cgctgtcagg	gctgcacgag	180
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agttccagcg	agcgtaccag	cctcagcctc	agcctcctca	tcaccaccac	caccacagtc	1380
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<210> 2006

<211> 283

<212> DNA

<213> *Eucalyptus grandis*

<400> 2006

gagaggtaca	agagtgcattg	cagtgattcc	tcacatccac	agtcggtttc	tgacgtgaac	60
actcagtttt	atcagcaaga	agcatccaag	cttcggagac	agataagaga	aatccaggtc	120
tcagataggc	atcttctagg	tgaggggtata	agtgatttga	gcttcaaggga	tctcaagaat	180
ctcgagagca	aattagagaa	atcgatcagc	cgtgttagat	caaagaagaa	tgagatgctt	240
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<210> 2007

<211> 252

<212> DNA

<213> *Eucalyptus grandis*

<400> 2007

agagaacaag	ataaacaggc	aggtgacctt	cgctaagagg	aggaatgggc	tgctcaagaa	60
ggcctatgag	ctctctgtcc	tctgcgatgc	tgaggtcgcc	ctcattatct	tctccaccgc	120
cggcaagctc	tatgagttct	gcagcagccc	tagcatgctc	aaaacgctcg	accgttacca	180
aaagtgcagc	tattggatccg	ttgaagttaa	caaaccctcc	aaagaactag	agaatgccta	240
ccgggagtag	tt					252

<210> 2008

<211> 386

<212> DNA

<213> *Eucalyptus grandis*

<400> 2008

tctagatcca	ccaccagcag	aaggaggttag	aagggggaga	aggaggagaa	ggaggaggag	60
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tactcgaagc	ggaggaattgg	catcttcaag	aaagcccaag	agctcacctg	cctctgcgac	180
gctagggttt	ccatcctcat	gctctccggc	aacaagaagc	tcacgcagta	catcagcccc	240
accacacga	caaaaaggat	gattgatgat	taccagaagg	ctcttgggat	cgatctgtgg	300
actacacact	acgatagaat	gcaagaggag	ttgaggaaac	tgaaggagggt	taataacaat	360
tttcgaagg	aaataaggca	gatatt				386

<210> 2009

<211> 123

<212> DNA

<213> *Eucalyptus grandis*

<400> 2009

gagaacactt	atgggggaag	atattggggac	cttgaactcg	aaggagctcg	agcagctcga	60
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tca						123

<210> 2010

<211> 581

<212> DNA

<213> *Eucalyptus grandis*

<400> 2010

cttagggcta	gcttgcttac	atcttcacca	tcttctcggt	agtttcaaca	cttttagagtt	60
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cccaggagag	cccgcagagt	gaaaaatggg	aggggaaaga	tcgagatcaa	gcggatcgag	180
aacacgcagc	atcgccaagt	gactttctgc	aagcgccgga	atggcctcct	caagaaggca	240
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cgccctctatg	agatagccaa	cgatagtgtc	aaagcaacca	tcgagaggta	caagaaggct	360
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gaatcccgca	agttgcaaca	acagattaat	aaatcgagca	acaataacag	gcaactgggt	480
ggtagctcaa	ttgctggggg	gaatatgaag	gatatgaaga	ctacggagca	aaaactagaa	540
aaagcaatcg	ctaaatctcg	cgccaaaaag	aatgcgattt	t		581

<210> 2011

<211> 538

<212> DNA

<213> *Eucalyptus grandis*

<400> 2011

tcagcacaag	gaacaaatgc	tggttgaagc	taacagagaa	ttaaggaaga	agctggaaga	60
gagcaatata	agaatccctc	tccgccttgg	atgggaagct	gaggatcaca	ataacatttc	120
atacagccgc	cttccatcgc	agtcgcgaag	attgatcttc	cagcccttag	gcggcaaccc	180
gacatctcag	atcggtgtaca	atcctgcagg	ctcgaatgaa	ttgaatgttt	cggctgcctga	240
ccaacatccc	aacggattca	ttcccgatg	gatgctctga	atcgttcocg	aagtgaactgc	300
cttgctggaa	gttccatctc	aagtacattt	tccagttttt	gctatgatat	atgactcttc	360
ttctcttgga	tgacctatac	gaagatccat	cattcgtgga	tattgtccat	ggacgtaccc	420
taaaaggaag	gacagtatga	atccaatcta	gcttactatt	ttgtataaga	ataaacatct	480
gtgctcgtga	tatttggaa	tcacttatgt	tattttaatga	aaaaaaaaaa	aaaaaaaaaa	538

<210> 2012

<211> 341

<212> DNA

<213> *Eucalyptus grandis*

<400> 2012

aggcagcaaa	gagctcgagt	ccttggaag	acagctagat	gggtcattga	agcagatcatg	60
atccacgaaga	actcagtaga	tgttagataa	gotgaactat	cttcaacatc	gggaacagtt	120
gctccacgaa	gcaaacagga	ccttgaatca	acggttgatg	gaaggatacc	ataatgaatgc	180
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actgcgcgca	cgcacacttg	ctcagcctca	cacggaagct	tttttcaatc	ccttggaaatg	300
tgaacccaact	ttgcaaatgg	gataccagcc	cgatccagtg	t		341

<210> 2013

<211> 934

<212> DNA

<213> *Eucalyptus grandis*

<400> 2013

gcgcatgac	gcggcgatgc	tccactgct	gcaacaagg	ccacaactcc	aggacctgcc	60
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ctctccactc	ctcctctggc	gccgcggcgg	cgccgcggcg	ctccgctccc	ggcgccgggg	180
tgaagctggt	cggggttagg	ttaacggagc	ggtcgatcat	gaagaagagc	ccagcgttgg	240
gggtcctctg	cgccgcgca	taccactcct	cgtcctccgc	cgccgcatcc	ccgaacccgc	300
gctcgtcccc	gatcgacggg	agcgacggct	acctgtccga	cgatcccgcc	cccgctccc	360
gctcgtccaa	tcggcgctgc	gagaggagaa	aaggtaaccc	atggacggag	gaagagcatc	420
gaaggttttt	aattgtcttc	cagaaattgg	gtaaaaggaga	ctggcgaggg	atagctcgtg	480
actttgtgac	tacaaggagt	cctactcaag	tggcaaggca	tgcccagaag	tatttatatc	540
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gtgtgctaaa gccaatccca gtaattccaa aaga 934

<210> 2014
<211> 372
<212> DNA
<213> *Eucalyptus grandis*

<400> 2014
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ggatgcttta gttcacgagt cgaagactat gagcagtgcc aaaaataatt cacctgaaaa 180
aagtacaaat tcatctgctc tgacacctgg tgatataagc agttccactt tggatatttg 240
caagtctgaa tgggaagagt atggtgaccc catttctcca ccggggccatt ctgcaacttc 300
agttttcaat ggttgtactc ctttgagcac tagtggaagc tcactggatg aacaaccgta 360
tcccgatacc tt 372

<210> 2015
<211> 411
<212> DNA
<213> *Eucalyptus grandis*

<400> 2015
gcacataaga aggaagctct tgaaccgagg gatcgatccg gcgacgcacc ggccattgaa 60
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gcgagacgac gccatgcgcg ccgcgctcgg ctacaagaac gagaacaacc cgacaacaac 180
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ttgccagcag cagcatcagc ctgatcgctc gatgggaatg gttgagggaa atcactgctt 300
tgccctcagc ctgggggtgc agaacagcaa ggagtcgagt tcgaggagag gagcgagcgg 360
gggaagcagc gcccatggcg gctacgactt tttgggggtg aagacgagcc g 411

<210> 2016
<211> 356
<212> DNA
<213> *Eucalyptus grandis*

<400> 2016
ctcgtcccca aggttttttt gcggaagtat ggagttcccg agtgaatttt cagagccctc 60
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gaaccggcag gtcacctttt gtaaaccccg gaacgggttg ttgaagaagg cttatgagct 180
atcgggtgtg tgcgatgctg aagtggcgct tattgtcttc tcgagccgtg gcaggctcta 240
tgaatatgct aacaacagtg tcagaggaac aattggagag tacaagaaag caagcagtgta 300
ttctcccaca tcccacagtc cgtttcctga agtggaacac tcagtttta tccagc 356

<210> 2017
<211> 356
<212> DNA
<213> *Eucalyptus grandis*

<400> 2017
agagagtaat ggggagaggg agagtggagc tgaagaggat agagaacaag atcaacaggc 60
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gcagcgctgg cccttctggc ataaataaga cgcttgaacg ataccaactg gacaacttca 240
ctctcaaga caacgttgct gaacatgaga cacaacagaa ctggttttcaa gagatatcaa 300
aattgaaggc aaaaatgaa ctcttcaaca aactccagaa gcatttgcct ggaaaa 356

<210> 2018
<211> 495
<212> DNA
<213> *Eucalyptus grandis*

<400> 2018
 caaggaagca acagtccttgc tgcaaccaga agctagtcca aactagtggg aggttgtggg 60
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 aagttcgagc cgttcgtcga cgagaggagtc ctgttgattt atccaagtgt tgtttaaagt 180
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 gagctctccg tctctgtgga cgctgacatc ggctctctca ttttctcccc ccacgggcaag 360
 ctctatgagc tggccaccaa aggaaccatg aaggggctga tcgagaggtt catgaagacc 420
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 gaagagatta acata 495

<210> 2019
 <211> 613
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2019
 agaaaagagac acagagatat gggaaagagg aaagtagagc tgaagaggat agagaacaaa 60
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 ttgaagctaa aaacaagagt ggaggtcctc caacgatctc agagaacct ccttggggaa 360
 gagttgggtc cctcaaaact gaaggagctg gagcaacttg agccacagtc ggagaattct 420
 ctgaagcaaa tctcgtctgc aaagacccaa ttcatgtttg atcaactggc tcactcttgc 480
 cacaaggagc aatgtctgtg tgaagctaac agagaattaa ggaagaagct ggaagagagc 540
 aatacaagaa tccctctccg ccttggatgg gaagctgagg atcaacaata catttcatatc 600
 agccgccttc ccc 613

<210> 2020
 <211> 564
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2020
 atcccccttgc ettggtcaac tctctcttct tccccctctc tctactcgga atatcatatc 60
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 gattacattc aaaagcagcg cgagggtagc tggcgaaact tctctcaagc cgcgggtctg 240
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 cagtatgaag acccatgac cctg 564

<210> 2021
 <211> 410
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2021
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 cagctctccg agctctaagt tcatattggt tagctctctc taggactgaa aacatctggt 300
 ctgctaaact ctctgatgt aatcgatagt tttgattgaa attaacgttt ctagtgggga 360
 tccatttact gcgactgtag cgattcgggc cacatttata taaagctat 410

<210> 2022

<211> 328
 <212> DNA
 <213> Eucalyptus grandis

<400> 2022
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 ttttagcttc ttaccctctg tgtttgatgt gaattattgtc cgatgtctct gatgttctta 180
 cttcatcttg ttggcagtg taaaatgtca gtctcgtgtc tgttgactgg attggctctc 240
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 tgaatgggtg taacaaacct atattagc 328

<210> 2023
 <211> 380
 <212> DNA
 <213> Eucalyptus grandis

<400> 2023
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 ggctgcgtga aaattgaaat acagccaata acgcacgagc gaaaccgatc tgtcacattc 180
 ctcaagcgca agaaggggct gttcaagaaa gcgtatgagc tcggtgtgct ctgctctgtc 240
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 aacggtggcc ctggggactt 380

<210> 2024
 <211> 322
 <212> DNA
 <213> Eucalyptus grandis

<400> 2024
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 aaaaaatcag gctcctataa actattacca tcatactggc tatcatcaat tagtttgatg 240
 gggtttgata aattctctatt gtataagggt gatgtcaaaa ccgcggcggg tgatcgttta 300
 ggcagtttga cggccaagcc ga 322

<210> 2025
 <211> 387
 <212> DNA
 <213> Eucalyptus grandis

<400> 2025
 gaaagaaggg agtagagaag gaggtgacat aaatttgcca cagaggcaac ggaactttggg 60
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 gatggcaagg cctggcgaca atggagttca tgaagaaatg tcacaattca ctagtaattg 180
 tctcgcagat agtgcgggctg ctggaaaacga ttctcatatt tctagtaagc ctgctgggtc 240
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 gcttgaacca ccggctccgc tttttccaaa gccggaaact gtgtcatttg caacctccgt 360
 gcatctacca aatacagctt catatag 387

<210> 2026
 <211> 450
 <212> DNA
 <213> Eucalyptus grandis

<400> 2026
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tcaaaagactg	tcatctcagat	ccgaagccat	gcccaagaat	actctttgaa	agtcacaaag	300
aatggggcag	ttgcacatgt	tccacctcct	cgtcctaaac	gcaaagctgc	tcatccctac	360
cctcaaaaag	catcagaaa	tggttttagt	ccgctgcaag	catccatggc	ccagccttct	420
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<210> 2027

<211> 786

<212> DNA

<213> *Eucalyptus grandis*

<400> 2027

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tccttccctc	ccaccaaccgc	tctcttctat	ttatctctct	tctctcttct	ttcctccatg	180
agcgggtgct	ttcaggttgg	atgcaccact	tcaactcaac	ctcaatacat	aaacgtcggt	240
ttgggaaaa	gataaaaggca	gggagaaagg	gatggggagg	tcacgtgtgt	gcgagagcga	300
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ccacatcaag	agaaagcttc	acgcacggcg	gatcgatccc	caaacccacc	gtcctctctg	660
actacaccag	cactgctggt	gctgggtgct	ctgccacttc	acactcactc	ttctaacgct	720
aacaacagcg	gcaacaaggc	cacgcctcac	tcgacgactt	gtgaagaatt	atcatcatca	780
tcaaca						786

<210> 2028

<211> 476

<212> DNA

<213> *Eucalyptus grandis*

<400> 2028

agaagcgctg	agttcttggg	caaagctctag	cagtttccgg	ttctccatca	atcgagtcgg	60
agtggggaga	aatgagcaca	aattgggttc	tgaagtctga	ccaaagtctt	tagtgagatg	120
gttgctgtct	cccgcttctc	tccaaacaga	tgtctgatca	aataaacttc	ttgaccgcga	180
gtatgaactc	tccttttagc	cagcttggtt	acccaagaag	gatgcacacc	tacgagccat	240
ttgaccaggt	ccccatgtgg	ggagacacct	tcaaaagctg	caaggtcaaa	aatctcgagg	300
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ttttctcatg	atcggcagaa	aattccagct	ccaggagcga	tcaagaagca	aatagacactg	420
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<210> 2029

<211> 535

<212> DNA

<213> *Eucalyptus grandis*

<400> 2029

cagccggatg	taccttagtg	tactgaatag	cctaaagcca	tggtctctatc	agatgttaac	60
ttgcataatg	aaatgaatat	tacaacatgc	gcgctttctt	gagttttttt	tcctctctga	120
gttgccacgg	aagaagcgct	gagttcttgg	tcaaaagcta	gcagtttccg	ggctcccatc	180
aatcgagctg	gagtgaggag	tatgaactct	cctttagccc	agcttggtta	ccaagaagg	240
atgcacacct	acgagccatt	tgaccagttc	cccatgtggg	gagacacctt	caaagctgac	300
aaggttaaaa	atcttgaggc	atcgtcatct	gtgattgtgc	atgcagtaga	tgatggattg	360
gacaagaagt	ttgaatatgt	ttctcatgaa	tcggcagaaa	attccagctc	caggagcgat	420
caagaagcaa	atagacctga	caaggtacag	agacgtctag	cacagaaccg	tgaagctgct	480
cgaaaaagcc	gtctcggaaa	gaagaaatat	gtacaaacac	tagaatcaag	ccgct	535

<210> 2030

<211> 723

<212> DNA

<213> *Eucalyptus grandis*

<400> 2030

gtgaggcgct	gcctccacca	ccaccgcgct	ccccaccgcc	gcgcgcgcca	ccaccaccac	60
caccaccacc	accaccctat	actgtacaaa	taatcccttg	gcctcggccg	ttatagcctc	120
ttactcaaaa	atcagttttt	acccttttct	gttgctgagt	cgtagttttg	ggccaggggt	180
tctattcggt	atatctagag	aagtcagttg	gcgaaaccga	gcgtcgagcg	gtcgccgatg	240
gcttctctct	ctctctgtag	ttccgcgagg	aaggacgcgg	atcggatcaa	ggggcgttgg	300
agccccgagg	aggacgaggg	gctgcagagg	ctggtccaga	gctacggccc	ccgcaactgg	360
tcctcgatca	gcaagtccat	ccggggcgcg	tcggcgcaag	cgtgccggct	ccggtggtgc	420
aaccagctct	cgccccaggt	ggagcaccgc	cccttcaccc	cggaggaggga	cggggccatc	480
gtccgcgccc	acggcaggtt	cggaacaaga	tgggccacca	tcgctcgccct	cctcaacggc	540
cgacccgaca	acgcccgtcaa	gaaccactgg	aactccaccc	tcaagcggaa	gtgctcctcc	600
acgtgctcgg	ccggcgcgca	cgacggcgac	gccctcgccg	agcagcagcc	gctcaagcgg	660
tcggccagcc	tcgggacgcc	cacggggcgc	aaacacgcgc	tctccgatct	gtttcttcagc	720
ccg						723

<210> 2031

<211> 412

<212> DNA

<213> *Eucalyptus grandis*

<400> 2031

gctctctctc	tctctctctc	tctctctctc	tctctctctg	gtggctttct	tctgtttttg	60
gctgtgatac	gacaaaacaa	aaccatctgg	ttcggcgctc	gaacaagaaa	aaattttgga	120
agggattcaa	ggaagatcaa	gaaagagaag	ataaagataa	agaagatcaa	gaactgtgacg	180
gcgagggcgg	tgacattctc	gaagaggaga	agagggctga	tcaagaaggg	cgaagagctc	240
tcctgtctgt	gtgatgctga	cgtgtccctc	atcgtctctc	cagccaactg	caagctctat	300
gattttccca	gtccacggca	gatgaagggg	gaggatctgg	aggggttaaa	cgtggaggaa	360
ttggaccaat	tagagaagaa	actcgaggcg	ggactgagcc	tcgtgatcaa	ga	412

<210> 2032

<211> 495

<212> DNA

<213> *Eucalyptus grandis*

<400> 2032

gagttaccac	caccctcttg	ttttattttc	gatcctgcat	ctctcaaaat	gaggaaaacct	60
gatgcctctg	ggaagaacag	ctccaacagc	aacgctaaca	agctgagaaa	aggactctgg	120
tcgcctgaag	aggacgacaa	gttgatgaac	tacatgctca	acaatggcca	aggctgctgg	180
agcgatgtgg	cccggaacgc	cgggctgcag	cgggtggcca	agagttgccg	cctccggtgg	240
atcaactact	tcggcgccga	cctcaagagg	ggcgctttct	ccccacaaga	ggaggagctg	300
atcactcact	tgcatctcat	ccttggcaac	aggtggctgc	aaatcgcgcc	tcggttgccc	360
ggacggactg	acaacgaaat	aaagaacttt	tggaactcga	ccataaagaa	gaggtcaaga	420
actcgtcatc	atcttcttgt	agacactcgg	caaacacgag	cgattctcct	tgtcatcaga	480
cgtaaagat	gtatg					495

<210> 2033

<211> 220

<212> DNA

<213> *Eucalyptus grandis*

<400> 2033

gcccccgaga	tcggcgccgc	gctcggcgcc	cctcggcgcc	ggcaccaccg	gcggggcgac	60
tcggcgagca	atttccggat	cccgaggagc	ctggatctgg	ggccggatcc	gttcgagaac	120
gggcccctcg	ggagcttcga	ggacttcgga	tcggaggatg	atctactcag	cactctacatg	180
gacatcgaga	aattcggatc	aagctcgagc	cgggcagggg			220

<210> 2034

<211> 445

<212> DNA
<213> *Eucalyptus grandis*

<400> 2034

cttctgagaa	tgtgtccggt	ggagccatcg	aacgtcccag	agccacggga	aaattggctg	60
cgctgtgaaa	ctcgccagc	atgtcctcat	cattggacct	gaagaattct	tgcatgggat	120
caaatgccaa	ccctgtgagc	attttgcaac	ctgtgtgtagt	gccacctgaa	gctgtgttac	180
aggttaattgt	actctgtggt	aggttactta	aaatatttcc	ctggaaggcc	agtacttctg	240
ttctttctgc	tgtttcttca	agttgctctc	tacaatatca	tgcactttgt	ttctcaaaat	300
tgcgtttgtg	taagaatgaa	agagaactga	aaagggagag	gaggaaacag	tgcgaacctg	360
aatctgctag	aagatcaaga	ctgaggaagc	aggctgagac	tgaagaactt	ggcaaaaagg	420
tggattctct	gagtgccgag	aatag				445

<210> 2035
<211> 349
<212> DNA
<213> *Eucalyptus grandis*

<400> 2035

tttttttttt	gtatataatc	tctttatttc	tagttaggga	aaattcagaa	agaagccgtg	60
aaggaacttc	atccaatggc	gatggaaaat	ctgaagtcca	aggaaaggtt	gctggggagg	120
tggatgctgc	tcttgagaat	gtgtccggtg	gagccatcca	acgtcccaga	gccacaggaa	180
aattggctgc	gcctgttaac	tgcgccagca	tggcctcatc	attggacctg	aagaattctt	240
gcatggatgc	aaatgccaac	cctgtgagca	ttttgcaacc	tggtgtgagt	ccacctgaag	300
cctgggtgaa	gaatgaaaga	gaactgaaaa	gggagaggag	ggaacagtc		349

<210> 2036
<211> 648
<212> DNA
<213> *Eucalyptus grandis*

<400> 2036

gagagagaga	aagccagaga	gagaaagagg	aggatttttg	atgaacgtat	attcattggg	60
agggtgctagt	catggggagg	caaccgtgct	gtgacaaatc	cgggggtgaag	aaaggaccgt	120
ggagggcgga	ggaggacaag	aagctcatca	acttcatcct	caccaacggc	cactgctgtc	180
ggcgtgcccgt	ccctaagctt	gccggcctcc	gccgctcgcc	caagagctgc	cgccctccgt	240
ggaccaacta	ccttcgcccc	gaacctcaaac	gcggcctcct	cagtgaggct	gaggagcagc	300
tgtctatcca	cctccatgcc	cgccctcgga	acaggtggtc	gaagatcgcc	gcaaggttgc	360
ccggggagaac	cgacaacgaa	ataaagaacc	atgggaacac	ccacatcaag	aagaagctgc	420
tcaagatggg	gatcgatccc	gtgacccacg	agcccttgaa	caagcctcag	aaaactccat	480
ccgaacacga	cccggaaagt	tctctgtcgt	catcgcaagc	ggaccctacg	tccgaatcgc	540
ccgcacaacac	gcaccaaac	aacaacgccc	acgcggaacga	agtacaactc	gtcctcgtcc	600
tcctccgtcgg	cctgtccgcc	gagaactggt	gctccggcag	ggacagat		648

<210> 2037
<211> 268
<212> DNA
<213> *Pinus radiata*

<400> 2037

ctgagcgaaa	atatggatga	cgtattttgt	cagcgctgca	acagaaactt	tacagctcga	60
gatcggctaa	tctctaaaga	gagaaggaat	tctgggtggg	tttgtggcgt	tactgaagag	120
gaagaagaac	ttattatcag	aattgtataag	ctcgtgggca	acaggtggtc	attgattgct	180
ggcgcccttc	ctggctgaaa	agctgaagag	attgagagat	attggaagat	gagaagcata	240
aatgctgcac	ctctgaagcc	taatacct				268

<210> 2038
<211> 1055
<212> DNA
<213> *Pinus radiata*

<400> 2038
 ggcgaaatcga gctccagctct ctgcccttag gcacacgtac aacatacgtg gctaacagag 60
 ataacaccca aagcctatcc agccatggc taggatggtg tggacagatga tacaggcagg 120
 agaggggttca gctggaccac agtttttgat agaattggtg ctcttgcttc ctccggtctct 180
 actaatcttc tgactttggc agtatgtctt ccgtgatata tttaatgtgt atacgttctt 240
 ttggggatctg cgagacagca gatccaagtc tgggctgtgt atctggaacg caattttaagc 300
 tctggctctct tcaattgggt ttctggtagc gagctccatc acaatggcca aagaattggt 360
 gatgatgtgt tccaactgtg ggccacagtg gccacagctcc agagcctgtc ctgatagagg 420
 atctgtcaaa ttgtttgggg tcaggctcat tgctacagac tagggcatgg cctgcgatgag 480
 aaagagcctc agtatgggca atctcggtca ttaccgttca ctttacaatg tcaatcaactg 540
 ttctgggaca agcgaatgtg gatctgcaga tcaggatggg tatttgcctg atggatttgt 600
 tcattctctc agcaatgcac gcgagaggaa aaaaggcgtc ccattggtcg aggaagagca 660
 caggatgttc ttgtatggac tggaaaagct agtggagggt gactggagag ggatatccag 720
 gaattttgtg acgaccagaa caccacacac agtagccagc catgccccaga agtatcttct 780
 aaggcagagc aatcttaata aaaggaaacg tcgatccagt ctctttgata tgtgtcctca 840
 tgatttccat gtcaacaagt cttttgcgag agaagactca ttgggaaacc tttatgaatt 900
 ttgcgcaaaa cattcggtct tgggggtatc gcctaatttc gaactatatt catttgggtg 960
 ttctccaaat ttatctctag gaagatccct gccaccagtg gaagcagttc ttgaagagaa 1020
 agcagcccat tatcatcctg tgaactcaga agaag 1055

<210> 2039
 <211> 167
 <212> DNA
 <213> Pinus radiata

<400> 2039
 ttggttacgc tctgtagcgg aatagatgaa catgcagctg gattctgttc tcaacttgtg 60
 ttgtcaccac ttgatgcac ttttgcgtat gatgctcttc tggctccctc tgggttccga 120
 gtaattcttc tagaattcgg atcagaatgt ttctctccca aaacgga 167

<210> 2040
 <211> 357
 <212> DNA
 <213> Pinus radiata

<400> 2040
 ggaggtgtta aattccccctg ttttgatctg ataactatga atctgatgga gtcttttgag 60
 gcaaaaggaa agggagagaa gagggagaa gtaggggga aaacccagtt gaagagaatt 120
 gagaacggga ccagcaggca ggttacttt ttgaagcgca ggaatggtct gctgaagaaa 180
 gcgtacgagc tgtcagtgct ttgtgatgcc gaagtggcac ttattgtttt ctccccaaga 240
 ggggaagctg atgagttcgc taatcccagc atgcagaaaa ttgttgaacg atacgaaaaa 300
 tgttcagaag gaagtacaacc gacgagtaca gcaaaagagc aagacgtcca ggtttta 357

<210> 2041
 <211> 438
 <212> DNA
 <213> Pinus radiata

<400> 2041
 ccgaagcaag atcagaaact cgttacttac atacaggagc atggccatgg cagctggagg 60
 cgtctgccgc agaaagctgg gttctgtgaga tgccgggaaa gctgcagatt cgtgtggggt 120
 aactatctaa gccacagatc caagcggggg aagttcactg tcaggaaga gacactatt 180
 attcaacttc atgcactact tggaaacagg tggctccgca ttgctactca ccttcccaag 240
 cgaaccgaca acgaatcaa aaactactgg aatacccac tgaagaagcg cttgctgcag 300
 atgggaatcg acccgtgac gcacaagccc aagtcggaat cgattatggt acctggtgtt 360
 cagtcctcca atgggtcttc gaacttgagc catatggcgc agtgggagag cgcgcgcctg 420
 gaagccgaat cgaaggctc 438

<210> 2042
 <211> 319
 <212> DNA

<213> Pinus radiata

<400> 2042

ggaatttttca	ttggaggaag	ttgtgttggt	ggggatcaaaa	gtcattcaat	gagtggaat	60
ggagccctag	catttgat	ggagtatgct	cggtgggttg	atgagcatca	tcgacagata	120
aatgaactga	ggcagcagc	gaactcacat	gtgggggaca	atgagctgcg	tggtctgggt	180
gaaggtgtca	tgggacatta	cgatgaaatt	tttcgtctga	agactgtagc	ttcaaaagct	240
gatgtcttcc	atctggtctc	tggcatgtgg	aagacgcctg	cagaaagatg	cttcatgtgg	300
atgggaggat	tccgtcctt					319

<210> 2043

<211> 404

<212> DNA

<213> Pinus radiata

<400> 2043

aaccggagag	caagaacaaa	gtggaaacgc	aacgaagtgg	agtgcgataa	tctgaaacgg	60
tggttcgaga	gtctgaggga	ggagaacaga	agattggaga	aagaagtgca	gtcgtgaga	120
gccatgaaag	tcccgcagtc	acccaattcg	atgcctctgg	cagccggcac	cctcgcaatg	180
tgctcggcct	gcgagggcct	tgcaatcaag	aaccgcggcg	ccgccacttc	ctccaccgcg	240
aagtcacaa	aatccctcct	tacaattatg	gggattgggg	atgtaaatat	gatatccaaa	300
aataacccaa	cccttcaat	gggaatggga	gatgaaatga	attgaagaaa	gtgaacttaa	360
aaaaaaaaaa	aaaaaaaaac	gagactagtt	ctctctctct	cttc		404

<210> 2044

<211> 379

<212> DNA

<213> Pinus radiata

<400> 2044

ctggaacctg	atagaagaga	agattgaagg	aagatcagga	aagagctgca	ggcttcgggtg	60
gtttaatcag	ttggacccaa	gaatcaaccg	aaggccttcc	actgaagaag	atgaggagaa	120
gctactggca	gcccactcgt	tatatgggaa	taaatgggcc	atgattgctc	gcttatttcc	180
tgggagaact	gataacgctg	tgaagaacca	ctggcatgtt	atcatggcca	ggagatacac	240
agagcaatcc	agtgcctttg	ggagaaggaa	attgcctcaa	gttcatagaa	gagagaaacg	300
tgctctgact	gatgatgaaa	cgaggatggg	cagcagcagc	tgcaacatgt	gggtggataa	360
atatagctct	ctcaaatct					379

<210> 2045

<211> 369

<212> DNA

<213> Pinus radiata

<400> 2045

ctcattgtct	acattcgagc	caacggcgaa	ggcagctggc	gttcccttcc	caaggctgca	60
gggctgcgga	gatgcgga	gagctgtagg	ctaagatgga	ttaaactacct	gcgtcccgat	120
ctcaagcgtg	gaagcttcac	agaagaagaa	gacgaactca	tcatcaaat	ccactccgct	180
gtcggcaaca	agtggctcct	tattgcagga	agattgccgg	ggcggaacgga	caacgagata	240
aagaactact	ggaacactca	catcaagaga	aaattgctga	tcaagggaat	cgaccgccag	300
tccatcgctc	gtctcgggca	gccctacagc	agcaacaata	tgcccgcttc	tcggctattt	360
ctgacctcgt						369

<210> 2046

<211> 530

<212> DNA

<213> Pinus radiata

<400> 2046

ctttccaa	ttgagcccaa	gcaaatcaaa	gtttggttcc	agaatcgaa	gtgccgagag	60
aagcagagga	aggaagcctc	gaggcttcag	actgttaaca	ggaagctgac	ggcaatgaac	120
aagtgtctca	tgaggagaa	cgatgcctt	cagaagcaag	tttcacagtt	ggtgtatgag	180

aatgggttaca	tgagacagca	gctacagaat	gcatctgtgg	ccgccacaga	cacaagctgt	240
gagctctgtgg	tgactagtgg	tcagcaacca	cataatccaa	cacctcagca	ccccccaaga	300
gatgcttagcc	ccgctggact	cctgtctata	gcagaggaga	ccttgacaga	gttccctttca	360
aaggctaaag	gagctgctgt	cgattgggtc	cagatgcctg	ggatgaagcc	tggtccggat	420
tcgattggta	ttgtagtcat	ttcaaatact	tgtaattggag	tagctgcacg	tgcttgcgggt	480
cttgttaggat	tagatcctac	aaaggttgca	gagatcctta	aagatcgccc		530

<210> 2047

<211> 358

<212> DNA

<213> Pinus radiata

<400> 2047

gctctaccag	tgctcaagcct	tgtttgaaaa	tggcgcagtc	gaaaaactct	caagaacctta	60
taattgatcta	tatgatgatt	taaaagaaga	aatactgtcg	tggtcgccag	tggaaatgtgt	120
gtgcagattt	cgcagcgtct	caaagcagtg	gaataatctc	ctgtcatcac	acaatttcat	180
aaaaaaggta	tggagaaaga	agcctgctaa	catgaaccca	tggtcgttc	tgcatcctgt	240
caactcctcc	tattgtttgg	catactgctt	cttcacaaga	acctggaaga	ctacctcctc	300
tatcttcatt	gaaaatgccca	ataattatgg	agaaaaacgga	atcttgggga	tcagctgc	358

<210> 2048

<211> 376

<212> DNA

<213> Pinus radiata

<400> 2048

aagacaagaa	gctcattaat	ttcctgacta	ctcatggcca	atgctgctgg	cgcaccgttc	60
cagagctgtgc	cggtgatttca	agatgcgga	agagttgcag	gctgagatgg	acgaattatc	120
ttcgcgccga	tttgaaaaga	ggagcttctc	cagagtcgga	ggagaaactt	atttttagatc	180
ttcattcgcg	tgttggtaac	agatggtcga	agattgcctc	gtttctgcct	ggcggaaccc	240
ataacgactc	aaagaactac	tggaaacccc	acatcaagaa	gaagctgaag	cgcactggag	300
tcgaccccg	cgacgcacag	gctattttcag	aaacactacc	acagccagcc	cctgtagctg	360
agaataatga	tgtccc					376

<210> 2049

<211> 656

<212> DNA

<213> Pinus radiata

<400> 2049

caaacatca	tcacgagatg	aaattccctt	cagaatggga	tttctgagat	tcgatccttg	60
atctgtlgtc	gcgatctgat	cacattttat	tgggggttta	gggtttaagt	tttctctgct	120
aatggcatcg	atgaaaggaa	aatctccggg	tcacgatgag	ccgatcgga	tcaaggggcc	180
ttggagcccc	gaggaggacg	cagcgtgcga	gcatttctgt	cagaaatcac	ggccacgcaa	240
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gtgcacacag	ctgagccccc	aagtgcagca	cgcgcccttc	actcctgaag	aggacgccac	360
tatcgtgaga	gccacgcgcc	agcaccggca	caaatgggccc	acgatctggc	gcgatgctcag	420
cggcagaaac	gacaaacgcta	tcaagaacca	ctggaaactcc	actctcaggga	ggcgttgcca	480
aggtgggggg	gcctctcgta	tcgacgacga	gatctccagc	ggcggccagc	gggttcgaaa	540
acggaaacct	agcgaagacg	ccgatgccag	ccggaaattc	aagaagctca	gcctcgggac	600
gacgacaacg	accacgacca	cggagcctag	cacctcctcg	gcctcggatc	ggagcg	656

<210> 2050

<211> 466

<212> DNA

<213> Pinus radiata

<400> 2050

atggggaaga	cgaagatgga	gatgaaacac	attcaaaacc	ctagccgccg	ccaagttaact	60
ttctcgaaac	gcaagaacgg	attgctaaaa	aaggcattcg	agctttctgt	ttctctcgat	120
gctgaagtcg	cccttatcat	tttctcgaa	actggcaaga	tcagcgagtt	tgcgaagccac	180

aacgacatgg	caacaatact	ggaaaaatat	cgcataatca	cgcaaacaga	aacagatgga	240
aacatggggg	cttcgctcgg	ccaaagcgtg	aagggatggg	ttcctaattt	tctcgagatt	300
gcgggattca	gtgttttggt	atgatcccta	ttattgcagt	gtgggttggg	gcacgagggg	360
tgcatgtgac	tcgactcata	tgattggaag	gttggtgaat	cacaattgaa	agcgttgcac	420
gagaggatgg	acaatttgaa	aaaaacaggaa	cgaaacatgg	ttgggtg		466

<210> 2051

<211> 390

<212> DNA

<213> Pinus radiata

<400> 2051

gtttgaagta	gaattttacct	atcaatttgcg	ttaaagatac	tctgtttttcg	gccctgaacc	60
ctaccagggg	aacgcggcgc	catgtctctcg	aggagctgtt	cggtgtgcgg	ccttaattggc	120
cacaattccc	gtacctgtgt	gggaagtggg	gtgatgctct	ttgggggttcg	tctgacggat	180
ggaccaatga	gaaagagtgc	tagtatgaat	aatttgtcaa	acttatctca	atatgagcac	240
tcggatccgg	ctgaggttgc	cgtgaaagg	tttgatgggt	acgtctcgg	tgacctcggt	300
cattcatcca	gcaatccccg	tgagaggaa	aggggagtg	cctggacaga	ggaagaacac	360
cggatgtttc	ttgtcggcct	tcagagagtc				390

<210> 2052

<211> 312

<212> DNA

<213> Pinus radiata

<400> 2052

gtttgaagg	gaacgcggcg	ccatgtcttc	gaggagctgt	tcgttgtgcg	gccttaattgg	60
ccacaattcc	cgtacctgtg	tggaagtgg	tgtgatgctc	tttgggggttc	gtctgacgga	120
tggaaccaat	agaaagagt	ctagtatgaa	taatttgtca	aaacttatct	aatatgagca	180
ctcggatccg	gctgaggttg	ccgtgaaagg	ttttgatggg	taactctcgg	atgacctcgt	240
tcattcatcc	agcaatgcc	gtgagaggaa	gaggggagtg	ccctggacag	aggaagaaca	300
cggatgttt	ct					312

<210> 2053

<211> 393

<212> DNA

<213> Pinus radiata

<400> 2053

cgaggtcgag	tccagctgag	gaggatcgaa	aacaaaaatca	gtcgtcaagt	aaactttttct	60
aagagacgga	acggactgat	gaaaaaggcg	gaggagctgt	caataactgtg	cgacgctgaa	120
gtggcctttaa	tcgtcttctc	caacaaagac	aaactgtacg	agttcgccag	ttccagtatg	180
accaagattt	tggaagaata	tcggaagcgt	tcaaatgtta	tacaagatat	cggtaaagat	240
ccacagaatt	gcacacattga	gttgacgcgt	ctaaaagaag	aggttgaccg	cttacaacaa	300
tcacagaagg	atctttttggg	tgaagacctt	catcaactag	gtgctacgga	tctgcaaac	360
ttagaacaac	agcgttgaa	agcgtttacaa	aag			393

<210> 2054

<211> 210

<212> DNA

<213> Pinus radiata

<400> 2054

cacagttctg	gaacctgtta	aagagaaatc	agtcgaggtc	aaactccttc	tgtttgcacg	60
aggatgcccc	gcattatgga	gaagcaaaat	agtggtgaa	atagtgatag	caagggtcag	120
cttgataatg	gcaagtatgt	ccgttacacc	aatgagcagg	tgagagacttt	agaacctgtc	180
tataatgaat	gctcaaagcc	cagcacaagg				210

<210> 2055

<211> 385

<212> DNA

<213> Pinus radiata

<400> 2055

aaaaattgaga	atactacaag	ccggcaggtt	acattctgtga	agcggagaag	tgggttgcgtg	60
aaaaaagcct	atgagttatc	tctgctgtgc	gatgcagaag	tggctctcct	caatttctcc	120
accagtgagg	gactctatga	atttgcgaa	aagagtgtta	gcgcgacaac	ggagcgggtac	180
atgagaaact	atgcagagaa	catgcctcag	tctcgagctc	gtctatccga	tgtgaccat	240
tggcaagagg	aagtccagaaa	acttacacag	caactgtgata	gtctaaccaa	tctgatcaga	300
caataatgg	gtgaaggcct	tgaatcatta	agcatgaagg	agctcaagca	tattcaagtt	360
caattggaaa	aaagtattag	ttgtg				385

<210> 2056

<211> 545

<212> DNA

<213> Pinus radiata

<400> 2056

tgaagacctt	gatgatttga	tccatccacc	ggagaagaag	agaaggttga	ctgctgacca	60
agtgcagttc	ctggaacgaa	gctttgagat	cgaaaacaag	ttggaacctg	agcgcaagat	120
acagctagcc	aaggagtgtg	gcctccaacc	taggcaagtt	gcagttcgtt	tccaaaaccg	180
gcgggcaagg	tggaaaacaa	agcagtttga	aagggtattat	gatattctga	aatcacgcta	240
tgaagaattg	agagttgatt	atgatagcct	gctcaagaa	aaggatataa	taagggctga	300
ggttacacct	ctaacagaca	agctacacga	cagtgaccaa	gaagccctca	caaaggattc	360
tgagtctgct	gacaagaaga	tctatcccca	gcttcgctcc	cactctgact	gtgttgggga	420
gcctgaaaga	agtaactgctg	ccaaggatcc	accaccaggt	tgtaaacacg	aagatctctt	480
gagctctgga	acagatagca	gtggggctcc	ggatgaagat	agtcctcacc	atgttgactg	540
tggtc						545

<210> 2057

<211> 385

<212> DNA

<213> Pinus radiata

<400> 2057

aaactttgct	acggattccg	acccttccgg	ctaaagctgc	tgcattttctg	tgtgtattga	60
agatggggag	atctccctgc	tgtgaaaaag	ctcatacaaa	caaagggcgc	tggaccaaag	120
aagaggacga	tcgcctcatc	gccccacattc	gaactcacgg	cgaaggttgc	tggcgctcgc	180
ttcccnaagg	cgcagggtgc	atgcgctgcy	ggaagagctg	cagggtccga	tggcataaac	240
acctgcgtcc	tgatctgaag	cgtggaaact	tctcagaaga	agaagacgaa	ctcgcctatca	300
aactccactc	cttactcggc	aacaagtgtg	ctcttatgtc	aggcagattg	cccggggcgga	360
cggacaacga	gataaagaac	tactg				385

<210> 2058

<211> 436

<212> DNA

<213> Pinus radiata

<400> 2058

aaagaagggt	gttccctgga	ctgaagaaga	gcacaggcag	tttttgatgg	gccttcgcaa	60
gtacggcaaa	ggcgactgga	gaagtatttc	tagaaacttt	gttggtgcaa	ggacaccaac	120
ccaagtgcgc	agccatgtct	aaaagtacta	cattcggtct	ggttcggata	ataaaaacaa	180
gagaagatcc	agcatatcat	atatcaccac	tggtcatggt	acagacagga	tgccctctcc	240
tttactgcac	gtttcttaata	ggcagactaa	ttccccctca	acacaggcag	aaatgaatca	300
ttcaccatgt	ctggacatat	ccatctcaga	tttcacgagg	acctctaata	aactcttttg	360
gacctcaaat	agatggtaac	cttctatttt	cacctcacta	tccctcaaat	ctgtataccc	420
agagagggtt	tgggggg					436

<210> 2059

<211> 624

<212> DNA

<213> Pinus radiata

<400> 2059
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 agctgcagca ccacgcggtt ttggattctc cctgttcttt gttctgttgc gtttaagatt 120
 ggttgcaagt cgaatcgccc agggcagatt gaattctctc gaggatgac aagatgacgc 180
 gcaagtgtcc gcaactgtggc aacaacgggc ataactccag gacgtgccct aaccgcgggc 240
 ggggtgaagct cttccgctgtt cggcttaccg atggcccgat cagaaaagagc gctagtatgg 300
 ggaatttgat gatgatgtcc aacctagct ctcgccgtga cccctccgag ccggcctctg 360
 ccgctgctgc tgcgcggcgc gcggcgccca gtggctatct cctctgatgg cttgttgaag 420
 cctccacttc ctccaattct cgcgagcgga agaaaaggtg gccatggaca gaggaggaac 480
 atagaatggt ttgtctaggt ttgcagaagc ttggcaaaag tgattggaga ggaatagcac 540
 ggaattttgt cataacacga acactacac aggtagccag ccatgacacg aatatattta 600
 ttcgacagag caatatgact agaa 624

<210> 2060

<211> 364

<212> DNA

<213> Pinus radiata

<400> 2060
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 gaagatgtct ctactctcta atgtttctac tctcagtgcg gattcccaatt ctaattccaa 120
 ttcgatctcc tegtccaggag acgaactcgc cgcaaaaggt aggaagccat acacaatcac 180
 aaagcagaga gagaggtgga gtgaagatga gcaatcttaag ttcttggaag ccttgaaaat 240
 gtatggccga gcatggagggc gaatcgaaga gcacataggc acgaaaacag cgtctccagat 300
 acgaagccat gtcacagaagt tcttctccaa gttggtaagg ggatcttcaa ataaaggtgt 360
 gtct 364

<210> 2061

<211> 258

<212> DNA

<213> Pinus radiata

<400> 2061
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 aggcgatgac cttgcggacg attgacactg gttccgtggg agtgaagcga gaggcagaaa 120
 gaacctttga gttggaggcg gagagggatc gaacctgcga cgtgagttcc aggacaagcg 180
 acgaggagga gatagggtcg acgaggaaaa agcttcggct ttccaaaggag cagtctgcac 240
 tcttgaggga aagtttct 258

<210> 2062

<211> 347

<212> DNA

<213> Pinus radiata

<400> 2062
 aactggaggt cactcacgtt gaaagaattg caacaactgg aaaagcaatt aggcagggct 60
 ataaaaaga ttataataaa aaagatgaaa ataatttcac aatgttgcaa atcattatca 120
 gaaaaggatc gctcttttga agaggagaat agtgaacttc ttaccaagtt gatctctaga 180
 gccgattctc ccacttctgg ggctgcgtta ttgttgata catccatgcc aaaatctcac 240
 tcagcaacgc aagcatggcg acaactcttc cagcgagtc ttgtgacagc agcgaagatg 300
 gcgacaactc ctccagcgag gcacagtaat tcccgaccga accacta 347

<210> 2063

<211> 267

<212> DNA

<213> Pinus radiata

<400> 2063
 tggcaaggca acatcgggat ctgcaaatga ggccatgtca caaagtgggg acagtggcag 60
 tgacgggtta agcgaaggaa gcgaggaata taacactcaa actgagtcac aagtggcgag 120

aaagagaagt	tttgatcaaa	tgatagtaga	tggagccaat	gctcagagta	ccaatatcca	180
atcatataat	tcccaggctg	gagaacccca	tgtgacttcc	ggcggggcatg	caatgggtaa	240
tcccatttag	caagctgttg	ctgcagt				267

<210> 2064

<211> 336

<212> DNA

<213> Pinus radiata

<400> 2064

tcaacttaaa	tggaaagaa	ggatctttaa	cgaagagaa	ctttttcttc	gtaaaaagtg	60
tggtgatgaa	catgtggatt	gttcgggcttt	tagaacacct	ccagcacaa	ttagaagcat	120
ccagaacatt	gatgtggaga	ctcaactggg	tataagacct	ccaactgtac	aacagcaccc	180
tgaactcgat	agtcctcgat	aactgttgca	tatgcaaat	ttctacttct	atgaaataaa	240
caaacagtac	acctcatctt	gttcgccttt	gttaaacgta	taattactac	tgcataatgta	300
agctttcttc	tcaaaaaaaa	aaaaaaaaaa	aaaaac			336

<210> 2065

<211> 573

<212> DNA

<213> Pinus radiata

<400> 2065

cgcagatcgg	gactgcaaac	agaaccatag	ttctgcaaca	ttcaatggga	cggactcctt	60
gttgtctgaa	agtggggactc	aatcgaggctc	octggacacc	cgaggaggat	ctttgcctct	120
caaatccat	cgaagctcac	ggagaaggcg	ggtgggaagac	acttccaaag	aaagcaggtc	180
tgctccgatg	cgggaagatg	tgcagattgc	gttgatgaa	ttatctccga	cccgatgtga	240
aaacacgggc	catattacc	gaggagagaa	atttaatact	caggttgcat	cgctctcttg	300
gaaactagg	gtctttgatc	gctggacgta	tgcccggcag	aacgataaat	aggatcaaga	360
actattggaa	taccacactc	agcaaaaagc	ttatcagta	gggtatcgac	cccggaagcg	420
acaaacccgt	gttcagaatcc	gaagacatat	gttcagatcc	cgggaatagc	gaagtggagc	480
gcaagtctca	acgggaaat	aacgtgaaa	taccaagaaa	agttgcgat	ggcgaggttg	540
atattcaaga	taaggaagag	gatattcacag	aag			573

<210> 2066

<211> 407

<212> DNA

<213> Pinus radiata

<400> 2066

atttaactgg	gattgcaagc	tgcttgtgtt	gtttctgtgc	ttcaagcgaa	gggaagggaa	60
gacattctcta	gagaagaaaa	aaatcaatat	caatggggag	ggggaagatt	gaaataaaaa	120
tgattgaaaa	tacagcaaac	aggcaagtca	cattctctaa	gagaaaagga	ggactcttta	180
agaaagctca	cgaactctcc	gttttatgca	atgcagaaat	tgctctcatc	gttttttcca	240
acactgggca	actccatgat	tggccaagct	ccagatgaa	aaaagtattg	gagaagtacc	300
agaaatcggg	tcaaggacta	ggacttatgg	actaccaaca	acaacagctg	ttgtgtgaaa	360
tgaacagcat	caccaaaagaa	aatgaaagcc	ttcgagctcg	tttaagg		407

<210> 2067

<211> 407

<212> DNA

<213> Pinus radiata

<400> 2067

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gactaaaagta	atagtggtcc	ccgaggtctg	gtgttcgaat	ctcgttggcg	tgaagggtca	120
aattttttctc	tcgagtttca	ttgattctga	aaaactggca	tagctatggc	gatgagcaat	180
gggagattgt	gtgaagattt	ggataggatt	aagggggcgt	ggagccccga	ggaggacgag	240
tcgctcgaga	ggcttgttca	gaataacggg	ccgaggaact	ggacccctgat	aagttaaggga	300
atccccgggg	gatccgggaa	atcgtgcagg	ctacggtggg	gcaatcagct	gagccctcag	360
gtggagcaca	gaccttttac	cccgtccgag	gatgctgcta	ttctgca		407

<210> 2068
 <211> 353
 <212> DNA
 <213> Pinus radiata

<400> 2068
 attttttctg tagatgggtg gaggacgtgc tgaatagttc ctaaatcgtt tcttcgcggt 60
 ttgggtcatcg aacgagttcc tataactcgc caagaccagg ttcttcacgg actactaatt 120
 ttgggtctctt acacatctttt cccggaaagta gatggggcgg gcactaggaa gaacagaaat 180
 aaagaggata gaaaaatgaag tgagcaggaa tgtgagtttt agaaagagac gacgtggatt 240
 gctgaagaag gctgcggagt tgtcaatact ttgcgatgca acagtgggcg ttgtgtgttt 300
 ctctccgggc gggaaacttt ctgaatatgc cagcacttcg gagcaaatgg ata 353

<210> 2069
 <211> 393
 <212> DNA
 <213> Pinus radiata

<400> 2069
 attcgaaac ctaccaatcg gcaactcatcc ttctacaaac gcaagggcgg ttgtcttaaa 60
 aaagcatttg aacttgcgtg tctctgtgat gctgaagttg cttctgataat cttctctgaa 120
 accggcagga ttacgagtt tgcaagccac gatgatgtga ccacagttat ggcaaaatcc 180
 cgaatacaaa cgaaaactcg cggaaacgca atgccttcac cgcttcaaaa aacagagatt 240
 gatcaattac aagtcaggat gttgcaggag aagatagaca atttggagaa acgaaaaaag 300
 catatggtcg gtgacaattt ggagtcactg acgtggaaag aattgcaaca agtcgaaaaag 360
 aaattaagca aggtcaaaa aataatttgt gcc 393

<210> 2070
 <211> 461
 <212> DNA
 <213> Pinus radiata

<400> 2070
 cagcctgtgg cctctgaaag catcgtccct cctcatcagc cgccgcacaa ccaaacgcgg 60
 aaccaatata tgcaaggatg gtgggtttga tatttaacat ttatcattat cagttaacttc 120
 aatacaaaa aaagcccaaa gcgtgggtaaa ttacgaattt agaattatat tatcattaaa 180
 aaaaaaccct attttcattg tatagcagta ggcttgattt actgctatga tagcgagggt 240
 tttattgggc aaacaaaccc tactgggtata ttgagacctc ttgtcgacaa agttaaattg 300
 cataaatctt gtatgtcaat ctggccgcga aaagacgat ggaataatag ttgtccattt 360
 caacacatcat gatattgtta aatccaaact gtatgtgtct gcaaaatatt attatacact 420
 acggttttatc acatgttagt cgatccgca taaaaaaaaa a 461

<210> 2071
 <211> 373
 <212> DNA
 <213> Pinus radiata

<400> 2071
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 ctccctgctg tgaaaaaagct catacaaaac aaggggcgtg gaccaaagaa gaggacgatc 120
 gcctcatcgc ccacattcga actcacggcg aaggttgcgt gcgctcgtt cccaaggcgc 180
 cagggtctgat gcgctgcggg aagagctgca ggctccgatg gataaactac ctgcgtcctg 240
 atctgaaagc tggaaacttc tcagaagaag aagacgaact catcatcaaa ctccactccc 300
 tactcggcaa caagtgtgtc cttattgcag gcagattgcc cgggcggacg gacaacgaga 360
 taaagaacta ctg 373

<210> 2072
 <211> 506
 <212> DNA
 <213> Pinus radiata

<400> 2072
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 ggccgcgaagt acccaaaactt gctggtctgc ttagatgtgg caagagttgt agattgcgtt 120
 ggacaattta cttgcccaca gatttgaagc gtgtgaatca gaggagaagc 180
 tcatcattga tctacatgct gccatagggg ataggtggtc acgaatcgct gcgcaattgc 240
 cagggaagac tgataacagc atcaagaatt actggaaacg gaggatcaag aagaacttgc 300
 gccagatggg aatcgatcct gtgactcaca agcctctcac ccaaatgcga atgcagagca 360
 cccctgccca gactctgtcg ctgcaagaaa atgatacaga gcagcagcag caggagcaac 420
 ataatgagcc tgatcctgat cagaatcaga gcagcaatgg cactgtggag acattggtct 480
 cgagggccag gaaccccac gaccac 506

<210> 2073
 <211> 494
 <212> DNA
 <213> *Pinus radiata*

<400> 2073
 attcagatgg aacaacaaca atgtctacat atgaagaaa agccagtcct cgagaattct 60
 atgctgttat atactccttc ttgctgcaac ttgaaggagg tataacagag atggaagata 120
 ataagcagaa gactgatttg aaagaagaat acaagaaacg ttgttgatga gaaaggagag 180
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 atgcacgattc agaattcagc cctttctgca gggatagctt gaaaacagtg aactcaaacg 360
 acttctggatg ttttcaagat aatgaagaag ttgttgacat ggaaacattg ggcagagaga 420
 acttaaaaag gctatttaac tacattgata aattgccact tatagtgcga gagagcctgt 480
 tttatgttta tgat 494

<210> 2074
 <211> 1678
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2074
 cttttttctt cctgtcctgt ttctctgtgc tcacatcttt taatatcaca ccgaggtctg 60
 aaltctgccca ggagccgcct ctgggtgctgg ctgacatttc acctagaagt cacaaaaact 120
 ttgtagttaac catcttcgga aagattttga ggaaacacgc gcagagggag agagagagag 180
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 ggtcagttga attgctgagc cagctcaatc cacaattctc aagctccacg acagcaaggga 720
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<212>	DNA					
<213>	<i>Eucalyptus grandis</i>					
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agcacgagca	cggcaacgccc	atgctgcagc	aaggtgggga	taaagagagg	cccgctggag	120
ccggagggaag	acgaggtctct	cgccagctac	gtgaggaggg	aaggcgaggg	gcggtggcgg	180
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gcagccattt	tgcaagatac	ttataatgct	tcaacattca	caccgaaagc	aactctacct	540
aatctctacg	taccagtggg	agaaacccgc	gacgaaaatg	atctgaaagt	gggcagacag	600
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<212>	DNA					
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atcaactaca	tagcgaatca	cggcggaagg	agttggaaat	ccctagccaa	agctgctgtg	180
ctaaaacgta	ccgggaagag	tgtcggctc	cggtggctga	actatctgag	accgcagctc	240
cgagagagca	acatcactac	tggaggagcg	ctccgatca	tggaactgca	tgccaaagtg	300
ggaaaacaggt	ggtctaaaaa	tgcaaaagat	cttccgggaa	ggactgcaca	tgagataaag	360
aacttctgga	ggactagaat	ccaaaagcac	atcaagcaag	cagaggcttt	ctctggtcag	420
agctccgaga	tgagtgatca	agcaagcaca	agccacatgt	ccagcatgcc	agagccgatg	480
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ctacatacat	gtgctagttt	agaagttatc	tacaataatg	tgcatgagtt	gtaaaacgaaa	780
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<400>	2077					
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gtgatgtgct	gtatacacta	ccatagcttt	gtgctaggta	tattagctag	cttgtagcag	840
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<210> 2078
 <211> 658
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2078						
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<210> 2079
 <211> 373
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 2079						
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<210> 2080
 <211> 421
 <212> DNA
 <213> *Pinus radiata*

<400> 2080						
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<210> 2081
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 <212> DNA
 <213> *Pinus radiata*

<400> 2081						
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gctggcgcg	gagtcacagc	tcaggggcaag	gggcctctgg	tctgcccgat	tgagaaacgt	720
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<210> 2082

<211> 244

<212> DNA

<213> *Pinus radiata*

<400> 2082

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<210> 2083

<211> 1151

<212> DNA

<213> *Pinus radiata*

<400> 2083

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aaaaaaaaaa	a					1151

<210> 2084

<211> 372

<212> DNA

<213> *Pinus radiata*

<400> 2084

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372

<210> 2085

<211> 1285

<212> DNA

<213> Pinus radiata

<400> 2085

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<210> 2086

<211> 1218

<212> DNA

<213> Pinus radiata

<400> 2086

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<210> 2087

<211> 473

<212> DNA
<213> Pinus radiata

<400> 2087
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aagtggcttc taattgcagg gagattgccc ggacggacgg acaacgagat aaagaactac 360
tggaacacac acatcaaaag aaaattgctg agcaagggac tcgaccccca aaccatcgct 420
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<210> 2088
<211> 1150
<212> DNA
<213> Pinus radiata

<400> 2088
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<210> 2089
<211> 723
<212> DNA
<213> Pinus radiata

<400> 2089
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tac 723

<210> 2090

<211> 768
 <212> DNA
 <213> Pinus radiata

<400> 2090

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<210> 2091
 <211> 479
 <212> DNA
 <213> Pinus radiata

<400> 2091

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<210> 2092
 <211> 557
 <212> DNA
 <213> Pinus radiata

<400> 2092

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<210> 2093
 <211> 356
 <212> DNA
 <213> Pinus radiata

<400> 2093

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gaacgggaac	agcagcgagg	ttactttttg	taagcgcagg	aacgggtctg	tgaagaaagc	180
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<210> 2094
 <211> 404
 <212> DNA
 <213> Pinus radiata

<400> 2094						
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aaattcttga	atccatgcaa	agaaagatgt	tgggcgagga	gctggcatca	tgtgcattga	360
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<210> 2095
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 <212> DNA
 <213> Pinus radiata

<400> 2095						
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gacgtttgaa	agatacga	aatgttcata	tgcaatgcaa	gataccacag	gggtttcgga	420
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gcagcgatca	caaagcgatt	tggtggggga	agatctgggt	cggttaaatg	ttaaggagct	540
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<210> 2096
 <211> 453
 <212> DNA
 <213> Pinus radiata

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<210> 2097
 <211> 509
 <212> DNA
 <213> Pinus radiata

<400> 2097						
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aaacaccgag	cggagagcgt	tgcatgagga	gaacaaatg	ttgggaaaaa	ggaaaaaagt	420
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<210> 2098

<211> 430

<212> DNA

<213> Pinus radiata

<400> 2098

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gcagacaggt	cacgttttct	aagcgaagaa	atgggttgc	gaagaaggct	ttcagctctc	180
cgggtgctgt	cgatgcagaa	gtgggactta	ttgtattctc	cccaagtggg	aagctctatg	240
aattttccg	tcctgtatg	ggaaaattgt	tggaagata	tgaaaagaat	tcacgagaaa	300
gtggtataaa	taatgcggct	aaagagaaag	atactcagca	ttcaaaacgc	gaaattgcaa	360
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<210> 2099

<211> 513

<212> DNA

<213> Pinus radiata

<400> 2099

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atcttltgaac	gcacgcaaat	aaagatgttg	ggcgaggaa	tgccatcatg	tgcatggaag	480
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<210> 2100

<211> 526

<212> DNA

<213> Pinus radiata

<400> 2100

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cagacggcaa	aaatatgaa	cttttccaat	aatacttcag	acgagaaaaa	gaagcaagaa	480
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<210> 2101

<211> 295

<212> DNA

<213> Pinus radiata

<400> 2101

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<213>	Pinus radiata					
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<210>	2103					
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<212>	DNA					
<213>	Pinus radiata					
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<212>	DNA					
<213>	Eucalyptus grandis					
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<210> 2105
<211> 1576
<212> DNA
<213> Pinus radiata

<400> 2105
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<210> 2106
<211> 210
<212> DNA
<213> Pinus radiata

<400> 2106
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<210> 2107
<211> 27
<212> PRT
<213> Pinus radiata

<400> 2107
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<210> 2108
<211> 126
<212> PRT

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<213> Eucalyptus grandis

<400> 2108

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 20 25 30
 Arg Arg Arg Ser Ser Leu Phe Asp Ile Thr Thr Asp Ser Tyr Phe Gly
 35 40 45
 Val Ser Ser Ser Thr Met Glu Glu Gly His His Gln Ala His Gln Val
 50 55 60
 Pro Ser Phe Pro Leu Ser Leu Pro Pro Ala Val Ser Pro Gly Thr Gly
 65 70 75 80
 Glu Lys Leu Leu Glu Ser Leu Arg Leu Arg Lys Glu Gly Cys Gln Ser
 85 90 95
 Lys Pro Thr Pro Ser Lys Pro Ile Arg Pro Val Pro Ile Leu Pro Ile
 100 105 110
 Pro Pro Ser Ser Lys Met Ala Ala Leu Asp Leu Asn Lys Ala
 115 120 125

<210> 2109

<211> 130

<212> PRT

<213> Eucalyptus grandis

<400> 2109

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 20 25 30
 Leu Ile His Ser Ile Thr Cys His Gly Glu Gly Arg Trp Asn Met Leu
 35 40 45
 Ala Lys Ser Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg
 50 55 60
 Trp Leu Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Asn Leu Thr Pro
 65 70 75 80
 Gln Glu Gln Leu Met Ile Leu Glu Leu His Lys Trp Gly Asn Arg
 85 90 95
 Trp Ser Lys Ile Ala Gln Tyr Leu Pro Gly Arg Thr Asp Asn Glu Ile
 100 105 110
 Lys Asn Tyr Trp Arg Thr Arg Val Gln Lys Gln Ala Arg Gln Leu Asn
 115 120 125
 Ile Glu
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<210> 2110

<211> 146

<212> PRT

<213> Eucalyptus grandis

<400> 2110

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 Arg Ala Leu Pro Ser Lys Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys
 35 40 45
 Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Lys
 50 55 60 65
 Phe Ser Leu Gln Glu Glu Gln Thr Ile Ile Gln Leu His Ala Leu Leu
 70 75 80

Gly Asn Arg Trp Ser Ala Ile Ala Thr His Leu Pro Lys Arg Thr Asp
 85 95
 Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu Lys Lys Arg Leu Ala
 100 105 110
 Lys Met Gly Ile Asp Pro Val Thr His Lys Pro Lys Asn Asp Ala Leu
 115 120 125
 Val Ser Ser Asp Gly Gln Ser Lys Ser Ala Ala Lys Leu Ser His Leu
 130 135 140
 Ala Gln
 145

<210> 2111
 <211> 99
 <212> PRT
 <213> Eucalyptus grandis

<400> 2111
 Arg Thr Leu Pro Lys Asn Ala Gly Leu Arg Arg Cys Gly Lys Ser Cys
 1 5 10 15
 Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Arg
 20 25 30
 Phe Thr Phe Glu Glu Glu Glu Thr Ile Ile Gln Leu His Gly Val Leu
 35 40 45
 Gly Asn Lys Trp Ser Ala Ile Ala Ala Gln Leu Pro Gly Arg Thr Asp
 50 55 60
 Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile Lys Lys Arg Leu Leu
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 Lys Met Gly Ile Asp Pro Val Thr His Ser Pro Arg Leu Asp Leu Leu
 85 90 95
 Asp Leu Ser

<210> 2112
 <211> 59
 <212> PRT
 <213> Eucalyptus grandis

<400> 2112
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 His Glu Ile Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
 35 40 45
 Ser Ala Lys Gly Lys Leu Phe Glu Tyr Ser Thr
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<210> 2113
 <211> 79
 <212> PRT
 <213> Eucalyptus grandis

<400> 2113
 Val Lys His Asp Val Glu Thr Leu Ser Ser Lys Val Lys Met Ala Glu
 1 5 10 15
 Glu Thr Val Lys Arg Val Thr Gly Leu Asn Pro Met Leu His Val Met
 20 25 30
 Ser Asp Met Ser Ser Val Gly Val Pro Pro Phe Asp Gly Ser Pro Ser
 35 40 45
 Asp Thr Ser Ala Asp Ala Ala Val Pro Val Arg Asp Pro Lys His Gln
 50 55 60

Phe Tyr Gln Thr Asn Ser Ser Asn Pro Ala Ser Ser Ala Asp Asp
 65 70 75

<210> 2114
 <211> 104
 <212> PRT
 <213> Eucalyptus grandis

<400> 2114
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 Ser Asp Ile Ser Gln Lys Tyr Asn Val Ala Ala Val Asp Asn Arg Val
 20 25 30
 Leu Glu Ala Asp Val Glu Thr Leu Arg Ala Glu Val Lys Met Ala Glu
 35 40 45
 Glu Thr Val Lys Arg Val Thr Gly Leu Asn Pro Met Leu His Val Met
 50 55 60
 Ser Asp Met Ser Ser Val Gly Val Pro Pro Phe Asp Gly Ser Pro Ser
 65 70 75 80
 Asp Thr Ser Ala Asp Ala Ala Val Pro Val Arg Asp Asp Pro Lys His
 85 90 95
 Gln Phe Tyr Gln Thr Asn Ser Met
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<210> 2115
 <211> 71
 <212> PRT
 <213> Eucalyptus grandis

<400> 2115
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 20 25 30
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 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
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 Leu Lys Arg Gly Thr Phe Ser
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<210> 2116
 <211> 55
 <212> PRT
 <213> Eucalyptus grandis

<400> 2116
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 Leu Gln Glu Gln Arg Ala Met Leu Glu Asn Glu Thr Leu Arg Arg Gln
 35 40 45
 Val Asp Glu Leu Arg Gly Phe
 50 55

<210> 2117
 <211> 62
 <212> PRT
 <213> Eucalyptus grandis

<400> 2117
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 Thr Lys Gly Lys Leu Phe Glu Tyr Ala Thr Asp Cys Cys Met Glu Arg
 20 25 30
 Ile Leu Glu Arg Tyr Glu Arg Tyr Ser Tyr Ala Glu Ser Gln Val Leu
 35 40 45
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 50 55 60

<210> 2118
 <211> 49
 <212> PRT
 <213> Eucalyptus grandis

<400> 2118
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 20 25 30
 Ala Ser Val Ser Ser Gln Asn Val Ala Gly Phe Ile Pro Gly Trp Met
 35 40 45
 Leu

<210> 12119
 <211> 195
 <212> PRT
 <213> Eucalyptus grandis

<400> 2119
 Ser Gly Ser Gln Val Ser Ile Ile Met Ile Ser Ser Thr Gly Lys Leu
 1 5 10 15
 His Glu Tyr Ile Ser Pro Ser Thr Ser Thr Lys Lys Met Tyr Asp Gln
 20 25 30
 Tyr Gln Gln Ala Leu Glu Val Asp Leu Trp Ser Ser His Tyr Glu Lys
 35 40 45
 Met Gln Glu Asn Leu Arg Lys Leu Lys Glu Val Asn Lys Lys Leu Gln
 50 55 60
 Leu Glu Val Arg Arg Arg Phe Gly Glu Gly Leu Asn Gly Met Ser Leu
 65 70 75 80
 Ser Glu Leu Cys Gly Leu Glu Gln Asp Met Asp Asn Ala Val Ser Leu
 85 90 95
 Ile Arg Glu Arg Lys Tyr Lys Thr Leu Gly Asn Gln Ile Asp Thr Ala
 100 105 110
 Arg Lys Lys Lys Lys Asn Ala Glu Glu Ile Asn Lys Ser Leu Leu Gln
 115 120 125
 Asp Trp Thr Asn Leu Ile Lys His Leu Arg Glu Asp Asp Pro His Phe
 130 135 140
 Gly Met Val Asp Asn Gly Arg Asp Tyr Glu Ala Val Ile Gly Tyr Thr
 145 150 155 160
 Asp Ala Ala Ala Ala Arg Leu Tyr Thr Leu Arg Leu Gln Pro Asp
 165 170 175
 Gln Pro Asn Leu Thr Ser Gly Gly Gly Ser Glu Ile Thr Thr Tyr Pro
 180 185 190
 Leu Leu Glu
 195

<210> 2120
 <211> 92
 <212> PRT

<213> Eucalyptus grandis

<400> 2120

```

Met Ala Phe Lys Ser Pro Gly Gly Ile Thr Trp Leu Lys His Leu Leu
 1          5          10          15
Val Lys Asn Phe Tyr Leu Gly Glu His Leu Lys Cys Arg Asn Gly Leu
          20          25          30
Ile Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ile Asp Ile Ala
          35          40          45
Leu Ile Met Phe Ser Pro Ser Asp Arg Val Ser His Phe Ser Gly Lys
          50          55          60
Arg Arg Ile Glu Asp Val Leu Thr Arg Phe Ile Asn Leu Thr Asp Gln
          65          70          75          80
Glu Arg Thr Leu Leu Asp Val Gln Asp Arg Arg Thr
          85          90

```

<210> 2121

<211> 41

<212> PRT

<213> Eucalyptus grandis

<400> 2121

```

Met Gly Arg Gly Arg Val Gln Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
          20          25          30
Tyr Glu Leu Ser Leu Leu Cys Asp Ala
          35          40

```

<210> 2122

<211> 96

<212> PRT

<213> Eucalyptus grandis

<400> 2122

```

Leu Gln Tyr Asp Trp His His Leu Ser Phe Cys Val Ile Ile Ser Val
 1          5          10          15
Leu Asn Leu Gln Asn Thr Ile Asn Gly Ser Cys Ser Met Glu Ser Ile
          20          25          30
Leu Glu Arg Tyr Glu Arg Tyr Thr Tyr Ala Glu Arg Gln Gln Val Ala
          35          40          45
Thr Asp Ser Pro Gln Val Gln Gly Ser Trp Ser Leu Glu Tyr Pro Lys
          50          55          60
Leu Val Ala Arg Ile Glu Val Leu Gln Arg Asn Ile Arg Asn Leu Ser
          65          70          75          80
Gly Glu Glu Leu Asp Pro Leu Ser Leu Arg Glu Leu Gln Tyr Leu Glu
          85          90          95

```

<210> 2123

<211> 76

<212> PRT

<213> Eucalyptus grandis

<400> 2123

```

Phe Leu Phe Arg Arg Lys Gln Gly Ala Val Glu Glu Leu Lys Met Val
 1          5          10          15
Gln Glu Val Arg Lys Gly Pro Trp Thr Glu Gln Glu Asp Phe Gln Leu
          20          25          30
Val Cys Phe Val Gly Leu Phe Gly Asp Arg Arg Trp Asp Phe Ile Ala
          35          40          45
Lys Val Ser Gly Leu Lys Val Ala Gly Glu Asn Asn Arg Tyr Val Arg

```

50 55 60
 Phe Lys Ala Trp Gly Phe Phe Gly Arg Ser Tyr Phe
 65 70 75

<210> 2124
 <211> 55
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2124
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Glu Asp Gln Arg Leu Ile Asp Tyr Ile Arg Leu His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ser Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu
 50 55

<210> 2125
 <211> 123
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2125
 Val Glu Gln Val Gln Phe Leu Glu Lys Ser Phe Glu Val Glu Asn Lys
 1 5 10 15
 Leu Glu Pro Asp Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu Gln
 20 25 30
 Pro Arg Gln Val Ala Ile Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys
 35 40 45
 Thr Lys Gln Leu Glu Lys Asp Tyr Glu Thr Leu Gln Ala Ser Phe Asn
 50 55 60
 Thr Leu Lys Ser Asp Tyr Asp Thr Leu Ile Lys Glu Arg Asn Asp Leu
 65 70 75 80
 Lys Ala Glu Val Leu Asn Leu Thr Asp Lys Leu Leu His Lys Gly Asn
 85 90 95
 Glu Lys Glu Ser Ser Glu Ser Ser Ser Lys Ser Ser Gln Gly Leu Phe
 100 105 110
 Gln Asn Pro Ile Ala Asp Ser Val Ser Glu Asp
 115 120

<210> 2126
 <211> 105
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2126
 Met Ala Arg Phe Pro Arg Val Asp Lys Ser Asn Ser Lys Lys Thr Val
 1 5 10 15
 Lys Lys Gly Ala Trp Ser Ala Glu Glu Asp Gln Lys Leu Val Ala Tyr
 20 25 30
 Ile Lys Arg Tyr Gly Ile Trp Asn Trp Thr His Met Ala Glu Pro Ala
 35 40 45
 Gly Leu Ala Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr
 50 55 60
 Leu Arg Pro Asn Ile Lys His Gly Asn Ile Thr Gln Glu Glu Glu Glu
 65 70 75 80
 Ile Ile Ile Asn Leu His Arg Val Leu Gly Asn Arg Trp Ala Ser Ile
 85 90 95
 Ala Ser Arg Leu Ser Gly Arg Thr Asp

100

105

<210> 2127

<211> 115

<212> PRT

<213> Eucalyptus grandis

<400> 2127

```

Met Ala Arg Glu Lys Ile Lys Ile Lys Lys Ile Asp Asn Val Thr Ala
 1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Gly Leu Phe Lys Lys Ala
 20          25          30
Gly Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Val Ile Phe
 35          40          45
Ser Ala Thr Gly Lys Leu Phe Glu Tyr Ser Ser Ser Met Lys Asp
 50          55          60
Thr Leu Glu Arg Tyr Thr Leu His His Asn Asn Leu Glu Asn Met Asp
 65          70          75          80
Gln Pro Ser Leu Glu Leu Gln Leu Glu His Ser Asn Asn Met Arg Leu
 85          90          95
Ser Lys Glu Val Ala Glu Lys Ser His Arg Leu Arg Gln Leu Arg Gly
100          105          110
Glu Asp Leu
115

```

<210> 2128

<211> 155

<212> PRT

<213> Eucalyptus grandis

<400> 2128

```

Met Gly Arg Lys Cys Ser Arg Cys Gly Asn Ile Gly His Asn Ser Arg
 1          5          10          15
Thr Cys Thr Thr Phe Met Gly Ala Ala Ser Ala Cys Gly Lys Leu
 20          25          30
Phe Gly Val Gln Leu Asp Leu Ser Ser Ser Pro Pro Ser Ser Ser
 35          40          45
Ala Ser Ser Gly Ser Ala His Pro Tyr Ser Leu Val Ile Lys Lys Ser
 50          55          60
Leu Ser Met Asp Arg Leu Ser Ser Ser Ala Ser Ser Ser Pro
 65          70          75          80
Ser Ser Ser Leu Ser Ser Pro Arg Val Leu Ala Asp Glu His Cys Asn
 85          90          95
Lys Thr Ser Leu Gly Tyr Leu Ser Asp Gly Leu Ala Ala Arg Ser Gln
100          105          110
Glu Lys Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe
115          120          125
Leu Met Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser
130          135          140
Arg Asn Tyr Val Thr Thr Arg Thr Pro Thr Gln
145          150          155

```

<210> 2129

<211> 145

<212> PRT

<213> Eucalyptus grandis

<400> 2129

```

Arg Gly Trp Arg Gln Ile Glu Glu His Val Gly Thr Lys Thr Ala Val
 1          5          10          15
Gln Ile Arg Ser His Ala Gln Lys Phe Phe Ser Lys Val Ala Arg Gly

```

```

      20          25          30
Val Ser Gly Ser Ser Glu Gly Val Ile Lys Pro Ile Glu Ile Pro Pro
      35          40          45
Pro Arg Pro Lys Arg Lys Pro Met His Pro Tyr Pro Arg Lys Ser Val
      50          55          60
Asp Ser Lys Glu Val Lys Leu Ser Tyr Gln Gln Glu Arg Ser Pro Ser
      65          70          75          80
Pro Ile Ser Ser Val Ala Asp Glu Asn Thr Gly Ser Pro Thr Ser Val
      85          90          95
Leu Ser Ala His Gly Ser Asp Met Leu Gly Ser Ala Ser Leu His Gln
      100          105          110
Gln Asn Arg Cys Ser Ser Pro Thr Ser Cys Thr Thr Asp Val Pro Ser
      115          120          125
Ile Gly Leu Ala Val Ile Glu Lys Gln Pro Glu Ile Phe Lys Glu Glu
      130          135          140
Asp
145

```

```

<210> 2130
<211> 156
<212> PRT
<213> Eucalyptus grandis

```

```

      <400> 2130
Phe Gly His Glu Phe Thr Ser Ser Pro Ala Ser Ser Ser Ser Leu Ser
      1          5          10          15
Ser Ser Arg Ile Ser Ile Gly Glu Asn Ser Asp Lys Ala Ser Leu Gly
      20          25          30
Tyr Leu Ser Asp Gly Leu Leu Gly Arg Ser Gln Glu Lys Lys Gly
      35          40          45
Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Val Gly Leu Glu
      50          55          60
Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Ser Tyr Val Thr
      65          70          75          80
Thr Arg Thr Pro Ala Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu
      85          90          95
Arg Gln Val Ser Phe Asn Lys Lys Lys Arg Arg Ser Ser Leu Phe Asp
      100          105          110
Met Val Asp Val Lys Thr Ala Ala Gly Asp Arg Leu Gly Ser Leu Thr
      115          120          125
Ala Lys Pro Ser Glu Ser Val Pro Asn Cys Lys Met Gly Thr Leu Met
      130          135          140
Ser His Leu Gln Val His Asp Ala Arg Thr Thr Gln
      145          150          155

```

```

<210> 2131
<211> 49
<212> PRT
<213> Eucalyptus grandis

```

```

      <400> 2131
Met Val Gln Glu Val Arg Lys Gly Pro Trp Thr Glu Gln Glu Asp Phe
      1          5          10          15
Gln Leu Val Cys Phe Val Gly Leu Phe Gly Asp Arg Arg Trp Asp Phe
      20          25          30
Ile Ala Lys Val Ser Gly Leu Lys Val Ala Gly Glu Asn Asn Arg Ile
      35          40          45
Glu

```

```

<210> 2132

```

<211> 151
 <212> PRT
 <213> Eucalyptus grandis

<400> 2132
 Asp Asp Val Cys Gly Gly Lys Arg Pro Glu Arg Pro Phe Phe Cys
 1 5 10 15
 Thr Tyr Asp Gly Glu Glu Asn Gly Asp Asp Tyr Asp Glu Tyr Leu
 20 25 30
 His Gln Pro Glu Lys Lys Arg Arg Leu Ser Ile Glu Gln Val Leu Tyr
 35 40 45
 Leu Glu Lys Ser Phe Glu Thr Asp Asn Lys Leu Glu Pro Asp Lys Lys
 50 55 60
 Val Gln Leu Ala Lys Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Ile
 65 70 75
 Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Met Glu Lys
 85 90 95
 Asp Phe Asp Lys Leu Gln Ala Ser Phe Asn Cys Leu Lys Ser Asp Tyr
 100 105 110
 Glu Ser Leu Leu Asn Glu Lys Glu Lys Leu Lys Ala Val Ile His
 115 120 125
 Leu Thr His Gln Leu Glu Gln Arg Ser Asn Gly Ile Leu Asn His Ser
 130 135 140
 Thr Tyr Leu Asn Asn Cys Thr
 145 150

<210> 2133
 <211> 133
 <212> PRT
 <213> Eucalyptus grandis

<400> 2133
 Met Gly Ser Arg Thr Arg Val Gly Gly Gly Asp Asp Gly Arg Val
 1 5 10 15
 Val Asn Gly Met Pro Ser Phe Val Pro Gln Leu Pro Thr Ser Asn Ser
 20 25 30
 Met Gly Ser Glu Gly Asn Ser Ile Arg Ser Ser Arg Ile Thr Asp Phe
 35 40 45
 Gly Thr Leu Glu Gln Ser Leu Gly Tyr Arg Ile Glu Asp Ala Val Asp
 50 55 60
 Leu Ser Arg Asn Pro Val Phe Asn Gln Met Lys Ser Ser Ala Gln Ala
 65 70 75
 Leu Gly Ala Asp Val Gln Phe Gly Ser Leu Asn Lys Ser Leu Ser Ser
 85 90 95
 Ser Asp Arg Asn Leu Ser Val Asn Ile Val Gly Ser Gln Thr Leu Ser
 100 105 110
 Met His Arg Glu Ser Gln Ser Asn Leu Val Ser Ile Pro Gly Ala His
 115 120 125
 Arg Glu Asn Trp Gly
 130

<210> 2134
 <211> 150
 <212> PRT
 <213> Eucalyptus grandis

<400> 2134
 Met Pro Pro Pro Arg Ala Ala Thr Pro Asp Val Ala Gly Asp Glu Ser
 1 5 10 15
 Ser Gly Ala Asp Ala Gly Ala Gly Glu Ile Met Leu Phe Gly Val Arg
 20 25 30

```

Val Val Val Asp Ser Met Arg Lys Cys Val Ser Leu Asn Asn Leu Ser
  35      40      45
Gln Tyr Gln His Pro Gln Asp Ala Asn Pro Pro Asn Ala Ser Gly Gly
  50      55      60
Ser Gly Gly Asn Lys Glu Ala Ala Lys Gly Tyr Ala Ser Ala Asp
  65      70      75
Asp Ala Ala His Asn Pro Gly Gly Gly Arg Glu Arg Lys Arg Gly Val
  85      90      95
Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu Gly Leu Gln Lys
  100      105      110
Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn Phe Val Lys Thr
  115      120      125
Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg
  130      135      140
Arg Ser Asn Leu Asn Arg
  145      150

```

<210> 2135

<211> 125

<212> PRT

<213> Eucalyptus grandis

<400> 2135

```

Glu Asn Val Ala Ser Gly Ser Thr Glu Arg Pro Arg Ile Arg His Gln
  1      5      10      15
His Ser Gln Ser Met Asp Gly Ser Thr Ser Ile Lys Pro Glu Met Leu
  20      25      30
Met Ser Gly Ser Glu Asp Ala Ser Ala Ala Asp Ala Lys Lys Ala Met
  35      40      45
Ser Ala Ala Lys Leu Ala Glu Leu Ala Leu Ile Asp Pro Lys Arg Ala
  50      55      60
Lys Arg Ile Trp Ala Asn Arg Gln Ser Ala Ala Arg Ser Lys Glu Arg
  65      70      75
Lys Met Arg Tyr Ile Ala Glu Leu Glu Arg Lys Val Gln Thr Leu Gln
  85      90      95
Thr Glu Ala Thr Thr Leu Ser Ala Gln Leu Thr Leu Leu Gln Arg Asp
  100      105      110
Thr Asn Gly Leu Thr Ala Glu Asn Ser Glu Leu Lys Leu
  115      120      125

```

<210> 2136

<211> 72

<212> PRT

<213> Eucalyptus grandis

<400> 2136

```

Met Ala Asp Ser Glu His Ser Ser Ser Asp Asp Thr Tyr Val Asp Ser
  1      5      10      15
Arg Glu Glu Thr Ser Glu Glu Ser Lys Leu Asp Phe Ser Glu Asp Glu
  20      25      30
Glu Thr Leu Val Ile Arg Met Tyr Asn Leu Val Gly Glu Arg Trp Ser
  35      40      45
Leu Ile Ala Gly Arg Ile Pro Gly Arg Thr Ala Glu Glu Ile Glu Lys
  50      55      60
Tyr Trp Asn Ser Arg Tyr Ser Thr
  65      70

```

<210> 2137

<211> 135

<212> PRT

<213> Eucalyptus grandis

```

<400> 2137
Met Ala Gly Glu Glu Pro Tyr Ser Ala Asp Thr Asn Ser Asp Thr Phe
 1          5          10          15
Ala Asp Glu Glu Thr Leu Ile Pro Ser Ser Ser Glu Ala Leu Glu Ser
 20          25          30
Ala Trp Val Pro Thr Ser Ser Thr Ala His His Gly Ser Lys Ser Val
 35          40          45
Val Asn Phe Glu Asp Val Cys Gly Gly Asp Thr Asn Thr Ala Pro
 50          55          60
Arg Pro Tyr Leu Arg Gln Ile Asp Leu Lys Glu Glu Ala Val Glu Glu
 65          70          75          80
Asp Tyr Gly Asp Gly Asn Phe Gln Pro Pro Gly Lys Lys Arg Arg Leu
 85          90          95
Ser Ala Asp Gln Val His Phe Leu Glu Arg His Phe Glu Val Glu Asn
100          105          110
Lys Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu
115          120          125
Gln Pro Arg Gln Val Ala Ile
130          135

```

<210> 2138

<211> 123

<212> PRT

<213> Eucalyptus grandis

```

<400> 2138
Asp Thr Glu Asp Ser Lys Lys Lys Glu Arg His Ile Val Thr Trp Ser
 1          5          10          15
Gln Glu Glu Asp Asp Ile Leu Arg Gln Ile Gly Ile His Gly Thr
 20          25          30
Glu Asn Trp Ser Ile Ile Ala Ser Lys Phe Lys Asp Lys Thr Thr Arg
 35          40          45
Gln Cys Arg Arg Arg Trp Tyr Thr Tyr Leu Asn Ser Asp Phe Lys Lys
 50          55          60
Gly Gly Trp Ser Pro Glu Glu Asp Val Leu Leu Cys Glu Ala Gln Lys
 65          70          75          80
Ile Phe Gly Asn Arg Trp Thr Glu Ile Ala Lys Val Val Ser Gly Arg
 85          90          95
Thr Asp Asn Ala Val Lys Asn Arg Phe Thr Thr Leu Cys Lys Lys Arg
100          105          110
Ala Arg Tyr Glu Ala Leu Ala Lys Glu Asn Thr
115          120

```

<210> 2139

<211> 126

<212> PRT

<213> Eucalyptus grandis

```

<400> 2139
Met Gly Arg Gln Pro Cys Cys Asp Lys Leu Gly Val Lys Lys Gly Pro
 1          5          10          15
Trp Thr Ala Glu Glu Asp Arg Lys Leu Val Asn Phe Ile Leu Thr His
 20          25          30
Gly Gln Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg
 35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp
 50          55          60
Leu Lys Arg Gly Leu Leu Asn Glu Ala Glu Glu Ser Leu Val Ile Asp
 65          70          75          80
Leu His Ala Thr Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala Arg Leu

```

```

      85                      90                      95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr His Ile
      100                      105                      110
Lys Lys Lys Leu Ile Arg Met Gly Ile Asp Pro Val Thr His
      115                      120                      125

```

```

<210> 2140
<211> 108
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2140
Pro Gly Ser Arg Ser Ser Asn Arg Arg Val Glu Arg Lys Lys Gly Asn
  1          5          10          15
Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile Gly Leu Gln Lys
      20          25          30
Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp Phe Val Thr Thr
      35          40          45
Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Tyr Ile Arg
      50          55          60
Gln Ser Asn Ala Gly Arg Arg Lys Arg Arg Ser Ser Leu Phe Asp Met
      65          70          75          80
Ala Pro Asp Met Val Cys Leu Leu Tyr Asp Val Ala Ser Ala His Ser
      85          90          95
Leu His Ser Val Gln Ile Ser Gly Ser Cys Met Phe
      100          105

```

```

<210> 2141
<211> 109
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2141
Met Arg Lys Pro Cys Cys Asp Lys Gln Asp Thr Asn Lys Gly Ala Trp
  1          5          10          15
Ser Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Arg Lys His Gly
      20          25          30
Glu Gly Cys Trp Arg Thr Leu Pro Lys Ala Ala Gly Leu Leu Arg Cys
      35          40          45
Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu
      50          55          60
Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile Ile Lys Leu
      65          70          75          80
His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu Pro
      85          90          95
Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser
      100          105

```

```

<210> 2142
<211> 65
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2142
Ser Pro Glu Glu Asp Glu Lys Leu Phe Asn Tyr Ile Thr Arg Phe Gly
  1          5          10          15
Val Gly Cys Trp Ser Ser Val Pro Lys Leu Ala Gly Leu Gln Arg Cys
      20          25          30
Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu
      35          40          45
Lys Arg Gly Met Phe Ser Gln Glu Glu Glu Asp Leu Ile Val Ser Leu

```


85 90 95
 Lys Ile Gly Glu Ser Gln Leu Lys Ala Leu Arg Glu Lys Met
 100 105 110
 <210> 2146
 <211> 50
 <212> PRT
 <213> Pinus radiata
 <400> 2146
 Leu Arg Gly Ala Asn Gly Cys Thr Ile Pro Ser Ile Gly Leu Thr Ser
 1 5 10 15
 Ile Glu Arg Val Glu Val Gln Thr Gln Leu Val Met Arg Pro Pro His
 20 25 30
 Ala Thr Glu Met Asp Asp Asn Phe Met Asp Val Asp Asn Val Pro Leu
 35 40 45
 Ser Gly
 50
 <210> 2147
 <211> 168
 <212> PRT
 <213> Pinus radiata
 <400> 2147
 Glu Asp Gly Ser Leu Val Ile Cys Glu Arg Ser Leu Ser Ala Ala Gln
 1 5 10 15
 Gly Met Pro Met Val Ser Gln Ser Gln Ser Phe Val His Gly Glu Leu
 20 25 30
 Leu Ser Ser Gly Tyr Leu Ile Arg Pro Cys Glu Gly Arg Gly Ala Leu
 35 40 45
 Val Ile Met Val Asp His Arg Asn Leu Glu Ala Ser Ser Val Pro Glu
 50 55 60
 Ala Leu Arg Pro Leu Tyr Glu Ser Ser Thr Phe Phe Ala Gln Lys Met
 65 70 75 80
 Thr Val Glu Ala Ser Tyr His Leu Gln Gly Lys Val Gln Pro Glu Met
 85 90 95
 Ile Ser Leu Ser Lys Lys Leu Gln Gln Pro Cys Asn Val Arg Ser Tyr
 100 105 110
 Ser Gln Arg Leu Cys Arg Gly Phe Asn Glu Ala Val Asn Thr Leu Pro
 115 120 125
 Asp Asp Gly Trp Met Ser Leu Ser Lys Asp Gly Leu Gly Asp Val Thr
 130 135 140
 Ile Cys Glu Ser Phe Val Lys Leu Pro Glu Pro Asn Ala Ser Gln Ile
 145 150 155 160
 Ala Tyr Val Asn Ser Met Gly Thr
 165
 <210> 2148
 <211> 120
 <212> PRT
 <213> Pinus radiata
 <400> 2148
 Glu Asn Glu Ser Leu Arg Ala Arg Leu Arg His Met Asn Gly Asp Asp
 1 5 10 15
 Ile Asn Ser Leu Lys Leu Pro Glu Leu Phe His Leu Glu Gln Gln Leu
 20 25 30
 Glu Thr Ala Ala Thr Gln Val Arg Arg Arg Lys Asp Gln Val Leu Asp
 35 40 45
 Asn Glu Lys Ile Lys Arg Arg Asn Lys Met Arg Arg Lys Glu Asp Glu


```

      50              55              60
Asn Ile Ile Leu His Glu Met Leu Asp Gln His His Gly Gln Met Glu
65              70              75              80
Glu Asp Asn Ala Gln Ile Asn Phe Leu Phe Cys Gln Pro Leu Asn Arg
      85              90              95
Ser Asp Thr Thr Phe Pro Ala Ser Leu Leu Arg Leu Gln Pro Asn Gln
100              105              110
Pro Asn Leu Gln Asp Ile Gly Tyr
115              120

```

```

<210> 2149
<211> 165
<212> PRT
<213> Pinus radiata

```

```

<400> 2149
Ser Pro Gln Val Glu His Arg Pro Phe Ser Pro His Glu Asp Ala Thr
1      5      10      15
Ile Ile Gln Ala His Ala Arg His Gly Asn Lys Trp Ala Thr Ile Ala
20      25      30
Arg Leu Leu Pro Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn
35      40      45
Ser Thr Leu Arg Arg Arg Tyr His Gly Glu Lys Asp Gln Ser Asn Gly
50      55      60
Leu Ala Val Asn Leu Glu Ser Ala Ala Glu Asp Lys Glu Thr Met Thr
65      70      75      80
Pro Met Thr Pro Val Thr Ala Thr Ala Thr Ala Thr Ala Thr Ala Met
85      90      95
Pro Val Ala Leu Val Phe Pro Thr Ala Ala Asp Asn Val Arg Lys Arg
100      105      110
Ser Asn Ser Ser Cys Ser Ala Asn Asp Asn Pro Gly Asp Ala Glu Val
115      120      125
Glu Ser Cys Arg Leu Lys Arg Leu Asn Phe Ser Glu Ser Pro Ser Ser
130      135      140
Ser Glu Asn Ile Asn Asn Asn Asn Asn Glu Ala Val Ser Gly
145      150      155      160
His Cys Asn Ser Ala
165

```

```

<210> 2150
<211> 68
<212> PRT
<213> Pinus radiata

```

```

<400> 2150
Met Gly Arg Gly Pro Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Asn
1      5      10      15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Lys Lys Ala
20      25      30
Ser Glu Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe
35      40      45
Ser Asn Lys Gly Lys Leu Tyr Glu Phe Ser Ser Ser Ser Met Thr Lys
50      55      60
Ile Leu Glu Arg
65

```

```

<210> 2151
<211> 152
<212> PRT
<213> Pinus radiata

```

<400> 2151
 Gln Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile
 1 5 10 15
 Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Thr Phe Ser Pro Gln Glu
 20 25 30
 Glu Asn Leu Ile Val Glu Leu His Ser Val Leu Gly Asn Arg Trp Ser
 35 40 45
 Gln Ile Ala Thr His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn
 50 55 60
 Leu Trp Asn Ser Cys Ile Lys Lys Lys Leu Arg Gln Arg Gly Ile Asp
 65 70 75 80
 Pro Asn Thr His Arg Pro Leu Ser Glu Val Asn Ala Glu Ala Gly Asp
 85 90 95
 Ser Lys Asn Asp Asn Ser Asn Lys Glu Val Glu Thr Gln Ala Ala Met
 100 105 110
 Asp Glu Ser His Val Ser Ala Gly Asn Glu Phe Lys His Leu Asn Ala
 115 120 125
 Ile Pro Arg Ala Asp Thr Ala Asn Pro Lys Phe Phe His Val Pro Val
 130 135 140
 Glu Asp Asn Thr Leu Ile Ala Ser
 145 150

<210> 2152
 <211> 89
 <212> PRT
 <213> Pinus radiata

<400> 2152
 Met Arg Cys Thr Arg Trp Gln Gly Leu Pro Phe Ser Ser Lys Pro Lys
 1 5 10 15
 Val Lys Lys Gly Leu Trp Ser Pro Glu Asp Glu Lys Leu Ile Asn
 20 25 30
 Tyr Met Met Lys Asn Gly Leu Leu Gly Cys Ser Trp Ser Tyr Val Ala
 35 40 45
 Lys Gln Ile Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp
 50 55 60
 Thr Asn Tyr Leu Arg Pro Gly Leu Lys Arg Gly Ala Ile Ser Pro Glu
 65 70 75 80
 Glu Glu Gln Leu Ile Ile His Leu Gln
 85

<210> 2153
 <211> 94
 <212> PRT
 <213> Pinus radiata

<400> 2153
 Met Gly Arg Ala Pro Cys Cys Asp Lys Ala Asn Val Lys Lys Gly Pro
 1 5 10 15
 Trp Ser Pro Glu Glu Asp Thr Lys Leu Lys Ala Phe Ile Glu Gln His
 20 25 30
 Gly Thr Gly Gly Asn Trp Ile Ala Leu Pro Gln Lys Ala Gly Leu Lys
 35 40 45
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro
 50 55 60
 Asp Ile Arg His Gly Gly Phe Ser Glu Asp Glu Asp Asn Ile Ile Cys
 65 70 75 80
 Ser Leu Tyr Ala Ser Ile Gly Ser Met Val Ser Ile Ile Ala
 85 90

<210> 2154

<211> 217
 <212> PRT
 <213> Pinus radiata

<400> 2154
 Met Val Arg Gly Lys Thr Gln Met Lys Arg Ile Glu Asn Asp Thr Ser
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Ile Ile Phe
 35 40 45
 Ser Pro Arg Gly Lys Leu Tyr Glu Phe Ala Ser Pro Ser Met Glu Glu
 50 55 60
 Ile Leu Glu Lys Tyr Lys Lys Arg Ser Lys Glu Asn Gly Met Ala Gln
 65 70 75 80
 Thr Thr Lys Glu Gln Asp Thr Gln Tyr Ser Lys His Ser Lys Gln Lys
 85 90 95
 Leu Ala Asn Met Glu Glu Gln Ile Arg Ile Leu Glu Ser Thr Gln Arg
 100 105 110
 Lys Met Leu Gly Glu Gly Leu Glu Ser Cys Ser Met Ala Glu Leu Asn
 115 120 125
 Lys Leu Glu Ser Gln Ala Glu Arg Gly Leu Ser His Ile Arg Ala Arg
 130 135 140
 Lys Thr Glu Ile Leu Val Asp Gln Ile Glu Cys Leu Lys Arg Lys Glu
 145 150 155 160
 Arg Leu Leu Ser Glu Glu Asn Ala Leu Leu Ser Arg Lys Trp Val Asp
 165 170 175
 Arg Gln Ser Val Asp Gly Ser Gly Ser Thr Ser Ser Ser Ile Gly Leu
 180 185 190
 Gly Ser Ile Glu Gln Ile Glu Val Glu Thr Gln Leu Val Ile Arg Pro
 195 200 205
 Pro Asn Ala Gln Asp His Cys Ser Val
 210 215

<210> 2155
 <211> 113
 <212> PRT
 <213> Pinus radiata

<400> 2155
 Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Thr Phe Ser Gln Arg
 1 5 10 15
 Leu Cys Lys Gly Phe Asn Glu Ala Val Asn Gly Phe Thr Asp Asp Gly
 20 25 30
 Trp Ser Leu Met Gly Asn Asp Gly Met Glu Asp Val Thr Ile Leu Val
 35 40 45
 Asn Ser Ser Pro Ser Lys Leu Phe Gly Gln Gln Phe Ala Ser Ser Asp
 50 55 60
 Gly Leu Pro Ala Leu Gly Gly Gly Ile Leu Cys Ala Lys Ala Ser Met
 65 70 75 80
 Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg Glu
 85 90 95
 His Arg Ser Glu Trp Ala Asp Ser Asn Ile Asp Ala Tyr Ser Ala Ala
 100 105 110
 Ser

<210> 2156
 <211> 107
 <212> PRT
 <213> Pinus radiata

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<400> 2156
Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1      5      10      15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
 20      25
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
 35      40      45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50      55      60
Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile Ile Lys
 65      70      75      80
Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85      90      95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
100      105

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<210> 2157
<211> 124
<212> PRT
<213> Pinus radiata

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<400> 2157
Leu Trp Leu Arg Phe Ser Gly Met Asp Arg Ser Asn Ser Ala Thr Gly
 1      5      10      15
Glu Glu Asp Val Leu Ser Arg Cys Arg Glu Arg Lys Arg Phe Met Lys
 20      25
Leu Ala Ile Glu Asn Arg Tyr Lys Leu Ala Thr Ala His Val Ala Tyr
 35      40      45
Met Asp Ser Leu Arg Arg Met Gly Thr Gly Leu Arg Leu Phe Ala Glu
 50      55      60
Gly Glu Thr Met Ser Glu Ser Ser Tyr Ser Thr Ser Pro Ile Gly Thr
 65      70      75      80
Ser Glu Leu Ala Val Val Leu Pro Glu Lys Ser Val Ser Pro Ser Pro
 85      90      95
Phe Pro Ser Ser Ser Pro Ser Leu Ser Gln Pro Gln Ser Pro Arg Ser
100      105      110
Glu Arg Ala Glu Ser Arg Ser Pro Leu Asp Ser Phe
115      120

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<210> 2158
<211> 110
<212> PRT
<213> Pinus radiata

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<400> 2158
Asp Gly Leu Val Gln Asn Ser Arg Glu Arg Lys Lys Gly Val Pro Trp
 1      5      10      15
Thr Glu Glu Glu His Lys Met Phe Leu Leu Gly Leu His Lys Leu Gly
 20      25
Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn Phe Val Thr Ser Arg Thr
 35      40      45
Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg Gln Ser
 50      55      60
Asn Leu Asn Lys Arg Lys Arg Arg Ser Ser Leu Phe Asp Ile Ser Thr
 65      70      75      80
Asp Ser Met Glu Asp Cys Tyr Gln Gly Ile Pro Glu Leu Ser Pro Val
 85      90      95
Met His Asp Leu Ser Leu Gly Gln Asn Ser Ser Leu Thr Ser
100      105      110

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<210> 2159
 <211> 175
 <212> PRT
 <213> Pinus radiata

<400> 2159
 Ser Ser Pro Val Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp Ser Pro
 1 5 10 15
 Glu Glu Asp Asp Lys Leu Ile Asn Tyr Met Met Lys Asn Gly Gln Gly
 20 25 30
 Cys Trp Ser Asp Val Ala Lys Gln Ala Gly Leu Gln Arg Cys Gly Lys
 35 40 45
 Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg
 50 55 60
 Gly Ala Phe Ser Pro Gln Glu Glu Gln Leu Ile Ile His Leu His Ser
 65 70 75 80
 Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala Arg Leu Pro Gly Arg
 85 90 95
 Thr Asp Asn Glu Ile Lys Asn Phe Trp Asn Ser Cys Ile Lys Lys Lys
 100 105 110
 Leu Lys His Leu Ser Ala Ser Thr Asn Asn Ser Lys Ser Ile Ser Ala
 115 120 125
 Pro Asn Arg Thr Ser Thr Met Asn Ser Ser Ile Thr Pro Phe Ser Glu
 130 135 140
 Ser Ser Ala Glu Pro Leu Glu Val Met Ala Thr Arg Tyr Gln Pro Ser
 145 150 155 160
 Asn Ala Phe Asn His Glu Val Pro Thr Ala Glu Asn Gln Val Leu
 165 170 175

<210> 2160
 <211> 78
 <212> PRT
 <213> Pinus radiata

<400> 2160
 Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Leu Ala Tyr Ile Gln Glu His
 20 25 30
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp
 50 55 60
 Ile Lys Arg Gly Lys Phe Asn Pro Gln Glu Glu Gln Thr Ile
 65 70 75

<210> 2161
 <211> 159
 <212> PRT
 <213> Pinus radiata

<400> 2161
 Arg Thr Pro Arg Cys Asp Gln Met Gly Leu Lys Lys Gly Pro Trp Thr
 1 5 10 15
 Pro Glu Glu Asp Gln Ile Leu Ile Ser Tyr Ile Asn Lys His Gly His
 20 25 30
 Gly Asn Trp Arg Ala Leu Pro Lys Gln Ala Gly Leu Met Arg Cys Gly
 35 40 45
 Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Ile Lys
 50 55 60
 Arg Gly Asn Phe Ser Leu Lys Glu Glu Gln Thr Ile Ile His Leu His

```

65              70              75              80
Gln Ile Leu Gly Asn Arg Trp Ser Ala Ile Ala Ser His Leu Pro Gly
      85      90      95
Arg Thr Asp Asn Glu Ile Lys Asn Val Trp Asn Thr His Leu Lys Lys
      100      105      110
Arg Leu Leu Gln Ile Gly Val Asp Pro Val Thr His Ala Pro Arg Gly
      115      120      125
Tyr Asn Val Ser Asn Cys Tyr Thr Ala Val Asn Ile Arg Asp His His
      130      135      140
Gly Glu Gln Ala Asp His Gln Leu Gln Ser His Val Cys Val Ser
      145      150      155

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<210> 2162
<211> 49
<212> PRT
<213> Pinus radiata

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<400> 2162
Thr Pro Glu Glu Asp Arg Ile Leu Ile Ser Tyr Ile Lys Arg Asn Gly
1      5      10      15
His Gly Lys Trp Leu Ala Leu Pro Lys Gln Ala Gly Leu Ser Arg Cys
      20      25      30
Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asn Ile
      35      40      45
Lys

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<210> 2163
<211> 78
<212> PRT
<213> Pinus radiata

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<400> 2163
Met Gly Thr Gly Glu Glu Ala Thr Pro Thr Lys Pro Ala Ala Lys Pro
1      5      10      15
Ser Ser Ser Ser Gln Glu Thr Pro Thr Thr Pro Val Tyr Pro Asp Trp
      20      25      30
Ala Ala Ala Phe Gln Ala Tyr Tyr Gly Pro Gly Ala Thr Pro Pro Pro
      35      40      45
Pro Ala Phe Phe Ala Ser Thr Val Gly Ser Ala Pro Thr Pro His Pro
      50      55      60
Tyr Met Trp Gly Gly Gln Pro Leu Met Pro Pro Tyr Gly Thr
      65      70      75

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<210> 2164
<211> 113
<212> PRT
<213> Pinus radiata

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<400> 2164
Met Gly Arg Gly Lys Ile Glu Ile Lys Lys Ile Asp Asp Val Thr Ser
1      5      10      15
Arg Gln Val Thr Phe Ser Lys Arg Lys Met Gly Ile Phe Lys Lys Ala
      20      25      30
His Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Val Leu Ile Phe
      35      40      45
Ser Asn Thr Gly Arg Leu Tyr Asp Tyr Ala Ser Ser Arg Cys Met Glu
      50      55      60
Arg Thr Ile Glu Arg Tyr Glu Lys Cys Thr Lys Ala Ile Asn Cys Pro
      65      70      75      80
Thr Ser Asp Pro Ile Val Glu Asn Lys Ser Pro Ile Gln Glu Gly Ile

```


115 120 125
 Ser Thr Ser Leu Gly Glu Met Pro Gly Phe Asp Glu His His Phe Arg
 130 135 140
 Ile Glu Asn Thr Arg Leu Lys Glu Glu Leu Asp Arg Val Ser
 145 150 155

<210> 2168
 <211> 122
 <212> PRT
 <213> Pinus radiata

<400> 2168
 Met Gly Cys Thr Gln Gly Gln Arg Gln Gly Glu Trp Glu Gly Lys Gly
 1 5 10 15
 Val Pro Ser Asn Ser Ser Arg Arg Ser Leu Arg Lys Gly Leu Trp Ser
 20 25 30
 Pro Asp Glu Asp Ile Glu Leu Thr Thr Tyr Ile Met Arg Lys Gly Leu
 35 40 45
 Met Gly Cys Trp Asn Tyr Ile Ala Lys Gln Ala Gly Leu Gln Arg Cys
 50 55 60
 Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Gly Leu
 65 70 75 80
 Lys Arg Cys Ala Ile Ser Pro Gln Glu Glu Arg Leu Ile Ile Gln Leu
 85 90 95
 Gln Ser Ser Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala His Leu Pro
 100 105 110
 Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr
 115 120

<210> 2169
 <211> 101
 <212> PRT
 <213> Pinus radiata

<400> 2169
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Gln Gln Glu Asp Thr Arg Leu Val Ala His Ile Arg Ala His
 20 25 30
 Gly Gln Gly Gly Trp Ser Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Gln Arg Trp Ile Asn Tyr Leu His Pro Asp
 50 55 60
 Leu Lys Arg Ser Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile Val Arg
 65 70 75 80
 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp
 100

<210> 2170
 <211> 133
 <212> PRT
 <213> Pinus radiata

<400> 2170
 Arg Leu Leu Pro Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn
 1 5 10 15
 Ser Thr Leu Arg Arg Arg Tyr His Gly Glu Lys Asp Gln Ser Asn Gly
 20 25 30
 Leu Ala Val Asn Leu Glu Ser Ala Ala Glu Asp Lys Glu Thr Met Thr


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35          40          45
Pro Met Thr Pro Val Thr Ala Thr Ala Thr Ala Thr Ala Met
50
Pro Val Ala Leu Val Phe 55 Thr Ala Ala Asp Asn Val Arg Lys Arg
65 70 75 80
Ser Asn Ser Ser Cys Ser Ala Asn Asp Asn Pro Gly Asp Ala Glu Val
85 90 95
Glu Ser Cys Arg Leu Lys Arg Leu Asn Phe Ser Glu Ser Pro Ser Ser
100 105 110
Ser Glu Asn Ile Asn Asn Asn Asn Asn Glu Glu Ala Val Ser Gly
115 120 125
His Cys Asn Ser Ala
130

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<210> 2171
 <211> 120
 <212> PRT
 <213> Pinus radiata

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<400> 2171
Met Arg Cys Lys Thr Gly Gln Ala Gln Gly Val Leu Glu Val Glu Gly
1 5 10 15
Thr His Pro Ala Pro Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp Ser
20 25 30
Pro Val Glu Asp Asn Gln Leu Thr Asn Tyr Ile Leu Arg Arg Gly Leu
35 40 45
Val Gly Cys Trp Asn Tyr Val Ala Lys Gln Ala Gly Leu Gln Arg Thr
50 55 60
Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Gly Leu
65 70 75 80
Lys Arg His Pro Ile Ser Arg Gln Glu Gln Leu Ile Ile Glu Leu
85 90 95
Gln Ser Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala Gln Leu Pro
100 105 110
Gly Arg Thr Asp Ile Glu Ile Lys
115 120

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<210> 2172
 <211> 155
 <212> PRT
 <213> Pinus radiata

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<400> 2172
Gln Gln Leu Glu Ser Ser Arg Ile Lys Leu Lys Gln Ile Glu Gln Glu
1 5 10 15
Leu Glu Arg Val Lys Gln Gln Gly Ile Ser Ile Asn Gly His Leu Gly
20 25 30
Asp His Asn Gly Ser Gly Ala Ala Ala Phe Asp Met Glu Tyr Gly Arg
35 40 45
Trp Val Glu Glu Gln Asn Arg Gln Ala Arg Glu Leu Arg Ala Ser Leu
50 55 60
Gln Ala His Leu Thr Asp Ser Glu Leu Cys Val Leu Val Asp Asn Ala
65 70 75 80
Ile Ala His Tyr Asp Glu Leu Phe Arg Met Lys Gly Ala Ala Ser Lys
85 90 95
Leu Asp Val Phe His Leu Met Ser Gly Met Trp Lys Thr Pro Thr Glu
100 105 110
Arg Cys Phe Met Trp Met Gly Gly Phe Arg Pro Ser Glu Leu Leu Lys
115 120 125
Ile Leu Thr Pro Gln Ile Glu Pro Leu Thr Glu Gln Gln Ser Phe Ala
130 135 140

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Val Ser Ser Leu Lys Leu Ser Ser Gln Gln Ala
145 150 155

<210> 2173
<211> 63
<212> PRT
<213> Pinus radiata

<400> 2173
Met Val Arg Gly Lys Ile Gln Met Lys Arg Ile Glu Asn Thr Ala Ser
1 5 10 15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
20 25 30
Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Met Ile Phe
35 40 45
Ser Pro Gly Gly Lys Leu Tyr Glu Phe Ala Asn Thr Ser Met Glu
50 55 60

<210> 2174
<211> 76
<212> PRT
<213> Pinus radiata

<400> 2174
Arg Ala Arg Lys Thr Glu Ile Leu Val Thr Glu Ile Glu Gln Leu Gln
1 5 10 15
Arg Lys Glu Trp Ile Leu Ser Glu Glu Asn Ala Phe Leu Gly Lys Lys
20 25 30
Phe Val His Pro His Ser Val Ser Lys Thr Pro Gly Ser Glu Ser Gly
35 40 45
Ser Ile Gln Asn Ser Glu Val Glu Thr Gln Leu Val Met Arg Pro Pro
50 55 60
Cys Thr Asn Ala His Phe Leu Ile Asn Ser Ser His
65 70 75

<210> 2175
<211> 161
<212> PRT
<213> Eucalyptus grandis

<400> 2175
Arg Glu Ser Ala Asn Cys Ala Ser Arg Val Ala Asp Arg Arg Glu Asn
1 5 10 15
Arg Arg Arg Arg Asp Met Gly Asn Gln Lys Leu Lys Trp Thr Lys Glu
20 25 30
Glu Glu Glu Ala Leu Leu Ala Gly Ile Ala Lys His Gly Ala Gly Lys
35 40 45
Trp Lys Asn Ile Leu Lys Asp Pro Glu Phe Ala Pro Ala Leu Val Asn
50 55 60
Arg Ser Asn Ile Asp Leu Lys Asp Lys Trp Arg Asn Leu Ser Val Gly
65 70 75 80
Thr Ser Gly Gln Gly Ser Arg Asp Lys Gln Arg Leu Ser Lys Val Lys
85 90 95
Ser Leu Met Ala Ala Pro Gln Ser Ser Thr Val Pro Leu Asn Pro Gln
100 105 110
Ala His Ala Ala Ser Thr Asp Val Ala Leu Val Asn Ser Ser Asn Ser
115 120 125
Phe Gln Asp Gly Lys Asn Tyr Ser Leu Trp Val Ser Val Leu Leu Phe
130 135 140
Leu Phe Ser Asn Gly Asn Leu Phe Tyr Phe Tyr Pro Leu Leu Ser Phe
145 150 155 160

Leu

<210> 2176
 <211> 31
 <212> PRT
 <213> Eucalyptus grandis

<400> 2176
 Thr Arg Gln Ser Ala Arg Ala Leu Leu Ala Ile His Asp Tyr Phe Ser
 1 5 10 15
 Arg Leu Arg Ala Leu Ser Ser Leu Trp Leu Ala Arg Pro Arg Glu
 20 25 30

<210> 2177
 <211> 191
 <212> PRT
 <213> Eucalyptus grandis

<400> 2177
 Met Ala Ser Arg Lys Glu Val Asp Arg Ile Lys Gly Pro Trp Ser Pro
 1 5 10 15
 Glu Glu Asp Glu Ala Leu Arg Leu Leu Val Gln Lys His Gly Pro Arg
 20 25 30
 Asn Trp Ser Leu Ile Ser Lys Ser Ile Pro Gly Arg Ser Gly Lys Ser
 35 40 45
 Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val Glu His Arg
 50 55 60
 Ala Phe Thr Pro Glu Glu Asp Asp Ile Ile Val Arg Ala His Ala Arg
 65 70 75 80
 Phe Gly Asn Lys Trp Ala Thr Ile Ala Arg Leu Leu Ser Gly Arg Thr
 85 90 95
 Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu Lys Arg Lys Cys
 100 105 110
 Ser Pro Pro Leu Ser Pro Leu Ala Glu Glu Gly Asn Asn Arg Ala Phe
 115 120 125
 Asp Ala Ala Ala Gly Tyr Asp Gly Asp Leu Ser Pro Arg Glu Arg Pro
 130 135 140
 Ala Lys Arg Ser Ala Ser Ala Gly Pro Cys Leu Ser Pro Gly Ser Pro
 145 150 155 160
 Ser Gly Ser Gly Met Ser Asp Ser Ser Val His Phe Val Tyr Arg Pro
 165 170 175
 Val Ala Lys Thr Gly Pro Val Val Pro Pro Thr Val Glu Ala Thr
 180 185 190

<210> 2178
 <211> 113
 <212> PRT
 <213> Eucalyptus grandis

<400> 2178
 Gln Val Ala Gln Leu Arg Val Glu Asn Ser Thr Leu Leu Lys Arg Leu
 1 5 10 15
 Ser Asp Ile Ser Gln Lys Tyr Asn Val Ala Ala Val Asp Asn Arg Val
 20 25 30
 Leu Lys Ala Asp Val Glu Thr Leu Arg Ala Lys Val Lys Met Ala Glu
 35 40 45
 Glu Thr Val Lys Arg Val Thr Gly Leu Asn Pro Met Leu His Val Met
 50 55 60
 Ser Asp Met Ser Ser Val Gly Val Pro Pro Phe Asp Gly Ser Pro Ser
 65 70 75 80

Asp Thr Ser Ala Asp Ala Ala Val Pro Val Arg Asp Asp Pro Lys His
 85 90 95
 Gln Phe Tyr Gln Thr Asn Ser Ser Asn Pro Ala Ser Ser Ala Asp Asp
 100 105 110
 Met

<210> 2179
 <211> 314
 <212> PRT
 <213> Eucalyptus grandis

<400> 2179
 Met Lys Arg Leu Gly Ser Ser Asp Ser Leu Gly Ala Leu Met Ser Ile
 1 5 10 15
 Cys Pro Pro Ser Glu Glu Leu Gln His Ser Pro Arg Asn Gly Asn Pro
 20 25 30
 Ile Tyr His Ser Arg Asp Leu Gln Ser Met Leu Glu Leu Gly Leu Asp
 35 40 45
 Glu Glu Gly Cys Val Glu Asp Gln Ser Ala Gly Gly Gly His Val
 50 55 60
 Gly Gly Glu Lys Lys Arg Arg Leu Ser Ile Asp Gln Val Lys Ala Leu
 65 70 75 80
 Glu Lys Asn Phe Glu Val Glu Asn Lys Leu Glu Pro Glu Arg Lys Val
 85 90 95
 Lys Leu Ala Gln Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Val Trp
 100 105 110
 Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Leu Glu Arg Asp
 115 120 125
 Tyr Gly Val Leu Lys Ser Ser Tyr Glu Ala Leu Lys Leu Ser Tyr Asp
 130 135 140
 Ala Leu Lys His Asp Asn Glu Ala Leu His Lys Glu Ile Lys Glu Leu
 145 150 155 160
 Lys Ser Lys Leu Arg Glu Glu Asp Asp Asn Pro Glu Ser Asn Leu Ser
 165 170 175
 Val Lys Glu Glu Val Ile Ile Pro Gly His Asp Val Ser Asp Lys Ile
 180 185 190
 Arg Ala Ala Asp Asp Gly Asp Asp Asp Thr Lys Arg Ser Pro Pro Pro
 195 200 205
 Pro Ile Thr Ala Pro Pro Arg Glu Leu Ser Phe Asn Asn Gly Gly Leu
 210 215 220
 Lys Asp Gly Ser Ser Asp Ser Asp Ser Ser Ala Ile Val Asn Glu Glu
 225 230 235 240
 Asn Ala Ala Thr Ser Ser Ser Pro Asn Pro Ala Val Gln Ser His
 245 250 255
 Gly Gly Phe Leu Lys Phe Met Gly Ser Ser Ser Ser Ala Ser Pro
 260 265 270
 Pro Pro Ser Pro Pro Ala Ser Phe Gly Cys Phe Ser Phe Gln Phe
 275 280 285
 Gln Arg Ala Tyr Gln Pro Gln Pro Gln Pro Pro His His His His
 290 295 300
 His Ser Pro Tyr Val Lys Met Glu Glu His
 305 310

<210> 2180
 <211> 94
 <212> PRT
 <213> Eucalyptus grandis

<400> 2180
 Glu Arg Tyr Lys Ser Ala Cys Ser Asp Ser Ser His Pro Gln Ser Val

1	5	10	15
Ser Asp Val Asn Thr Gln Phe Tyr Gln Gln Glu Ala Ser Lys Leu Arg			
20	25	30	
Arg Gln Ile Arg Glu Ile Gln Val Ser Asp Arg His Leu Gly Glu			
35	40	45	
Gly Ile Ser Asp Leu Ser Phe Lys Asp Leu Lys Asn Leu Glu Ser Lys			
50	55	60	
Leu Glu Lys Ser Ile Ser Arg Val Arg Ser Lys Lys Asn Glu Met Leu			
65	70	75	80
Phe Ala Glu Ile Glu Tyr Met Gln Lys Arg Gly Leu Val Gln			
85	90		

<210> 2181
 <211> 83
 <212> PRT
 <213> Eucalyptus grandis

<400> 2181
Glu Asn Lys Ile Asn Ser Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly
1 5 10 15
Leu Leu Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val
20 25 30
Ala Leu Ile Ile Phe Ser Thr Arg Gly Lys Leu Tyr Glu Phe Cys Ser
35 40 45
Ser Pro Ser Met Leu Lys Thr Leu Asp Arg Tyr Gln Lys Cys Ser Tyr
50 55 60
Gly Ser Val Glu Val Asn Lys Pro Ser Lys Glu Leu Glu Asn Ala Tyr
65 70 75 80
Arg Glu Tyr

<210> 2182
 <211> 108
 <212> PRT
 <213> Eucalyptus grandis

<400> 2182
Met Gly Arg Gly Lys Ile Glu Ile Gln Lys Ile Glu Asn Asp Thr Asn
1 5 10 15
Arg Gln Val Thr Tyr Ser Lys Arg Arg Asn Gly Ile Phe Lys Lys Ala
20 25 30
His Glu Leu Thr Val Leu Cys Asp Ala Arg Val Ser Ile Leu Met Leu
35 40 45
Ser Gly Asn Lys Lys Leu His Glu Tyr Ile Ser Pro Thr Thr Thr Thr
50 55 60
Lys Arg Met Ile Asp Asp Tyr Gln Lys Ala Leu Gly Ile Asp Leu Trp
65 70 75 80
Thr Thr His Tyr Asp Arg Met Gln Glu Glu Leu Arg Lys Leu Lys Glu
85 90 95
Val Asn Asn Asn Phe Arg Lys Glu Ile Arg Gln Ile
100 105

<210> 2183
 <211> 40
 <212> PRT
 <213> Eucalyptus grandis

<400> 2183
Arg Asn Leu Met Gly Glu Asp Leu Gly Thr Leu Asn Ser Lys Glu Leu
1 5 10 15
Glu Gln Leu Glu Arg Gln Leu Glu Ala Ser Leu Lys His Ile Arg Ser

Thr Lys Thr 20 Gln Cys Met Leu Asp 25 30
 35 40
 <210> 2184
 <211> 161
 <212> PRT
 <213> Eucalyptus grandis
 <400> 2184
 Met Val Phe Pro Thr Gln Ala Thr Pro Glu Glu Ser Pro Gln Arg Lys
 1 5 10 15
 Met Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn
 20 25 30
 Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 35 40 45
 Tyr Glu Leu Ser Val Leu Cys Glu Ala Glu Val Ala Leu Ile Val Phe
 50 55 60
 Ser Ser Arg Gly Arg Leu Tyr Glu Tyr Ala Asn Asp Ser Val Lys Ala
 65 70 75 80
 Thr Ile Glu Arg Tyr Lys Lys Ala Cys Ser Asp Ser Ser Ser Ser Gly
 85 90 95
 Ser Val Ser Glu Ala Asn Val Gln Phe Tyr Gln Gln Glu Ser Ala Lys
 100 105 110
 Leu Gln Gln Gln Ile Asn Asn Met Gln Asn Asn Asn Arg Gln Leu Val
 115 120 125
 Gly Asp Ser Ile Ala Gly Met Asn Met Lys Asp Met Lys Thr Thr Glu
 130 135 140
 Gln Lys Leu Glu Lys Ala Ile Ala Lys Ile Arg Ala Lys Lys Asn Ala
 145 150 155 160
 Ile

<210> 2185
 <211> 92
 <212> PRT
 <213> Eucalyptus grandis

<400> 2185
 Gln His Lys Glu Gln Met Leu Val Glu Ala Asn Arg Glu Leu Arg Lys
 1 5 10 15
 Lys Leu Glu Glu Ser Asn Thr Arg Ile Pro Leu Arg Leu Gly Trp Glu
 20 25 30
 Ala Glu Asp His Asn Asn Ile Ser Tyr Ser Arg Leu Pro Met Gln Ser
 35 40 45
 Gln Gly Leu Ile Phe Gln Pro Leu Gly Gly Asn Pro Thr Leu Gln Ile
 50 55 60
 Gly Tyr Asn Pro Ala Gly Ser Asn Glu Leu Asn Val Ser Ala Ala Asp
 65 70 75 80
 Gln His Pro Asn Gly Phe Ile Pro Gly Trp Met Leu
 85 90

<210> 2186
 <211> 113
 <212> PRT
 <213> Eucalyptus grandis

<400> 2186
 Gly Ser Lys Glu Leu Glu Ser Leu Glu Arg Gln Leu Asp Gly Ser Leu
 1 5 10 15
 Lys Gln Ile Arg Ser Arg Arg Thr Gln Tyr Met Leu Asp Lys Leu Thr

```

      20      25      30
Asp Leu Gln His Arg Glu Gln Leu Leu His Glu Ala Asn Arg Thr Leu
   35      40      45
Asn Gln Arg Leu Met Glu Gly Tyr Gln Val Asn Ala Leu Gln Leu Asn
   50      55      60
Gln His Ala Glu Glu Val Gly Gly Tyr Gly His Pro Pro Pro Pro Pro
   65      70      75      80
Leu Pro Pro Gln Pro Leu Ala Gln Pro His Ser Glu Ala Phe Phe Asn
      85      90      95
Pro Leu Glu Cys Glu Pro Thr Leu Gln Met Gly Tyr Gln Pro Asp Pro
   100      105      110
Val

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<210> 2187
<211> 309
<212> PRT
<213> Eucalyptus grandis

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<400> 2187
Met Thr Arg Arg Cys Ser His Cys Cys Asn Lys Gly His Asn Ser Arg
   1      5      10      15
Thr Cys Pro Val Arg Gly Gly Gly Gly Asp Gly Gly Ala Ala Ala
   20      25      30
Ala Pro Ser Ser Ser Ser Pro Ser Thr Ser Ser Ser Gly Ala Ala Ala
   35      40      45
Ala Ala Ala Ser Ala Ser Gly Gly Gly Val Lys Leu Phe Gly Val
   50      55      60
Arg Leu Thr Asp Gly Ser Ile Met Lys Lys Ser Ala Ser Val Gly Cys
   65      70      75      80
Leu Ser Ala Ala His Tyr His Ser Ser Ser Ser Ala Ala Ser Pro
      85      90      95
Asn Pro Gly Ser Ser Pro Ile Asp Gly Ser Asp Gly Tyr Leu Ser Asp
   100      105      110
Asp Pro Ala Pro Gly Ser Arg Ser Ser Asn Arg Arg Val Glu Arg Lys
   115      120      125
Lys Gly Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile Gly
   130      135      140
Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp Phe
   145      150      155      160
Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr
      165      170      175
Tyr Ile Arg Gln Ser Asn Ala Gly Arg Arg Lys Arg Arg Ser Ser Leu
   180      185      190
Phe Asp Met Ala Pro Asp Met Ala Thr Ala Asp Gln Pro Ser His Pro
   195      200      205
Glu Glu Thr Phe Leu Pro Pro Leu Val Arg Leu Asn Asp Asp Thr Asn
   210      215      220
Ser Thr Thr Ser Thr Ser Met Gly Leu Asp Leu Glu Arg Thr Pro Met
   225      230      235      240
Glu Thr Ser His Pro Glu Thr Ser Glu Gly Gly Gly Asp Val Ala Met
      245      250      255
Glu Ser Ile Asp Gln Val Pro Leu Val Pro Cys Tyr Phe Pro Tyr Tyr
   260      265      270
Leu Pro Leu Pro Phe Pro Met Trp Pro Pro Asn Met Ala Pro Pro Glu
   275      280      285
Asp Gly Arg Val Val Glu Thr Ser His His Arg Val Leu Lys Pro Ile
   290      295      300
Pro Val Ile Pro Lys
   305

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<210> 2188
 <211> 123
 <212> PRT
 <213> Eucalyptus grandis

<400> 2188
 Trp Asp Thr Ser Ser Ser Pro Pro Thr Leu Leu Glu Ser Val Asp Asn
 1 5 10 15
 Phe Ile Leu Ser Pro Ala Arg Thr Gly Lys Ala Glu Ser Glu Cys Leu
 20 25 30
 Ser Pro Arg Asn Ser Gly Leu Leu Asp Ala Leu Val His Glu Ser Lys
 35 40 45
 Thr Met Ser Ser Ala Lys Asn Asn Ser Pro Glu Lys Ser Thr Asn Ser
 50 55 60
 Ser Ala Leu Thr Pro Gly Asp Ile Ser Ser Ser Thr Leu Asp Ile Cys
 65 70 75 80
 Lys Ser Glu Trp Glu Glu Tyr Gly Asp Pro Ile Ser Pro Pro Gly His
 85 90 95
 Ser Ala Thr Ser Val Phe Asn Gly Cys Thr Pro Leu Ser Thr Ser Gly
 100 105 110
 Ser Ser Leu Asp Glu Gln Pro Tyr Pro Asp Thr
 115 120

<210> 2189
 <211> 136
 <212> PRT
 <213> Eucalyptus grandis

<400> 2189
 His Ile Arg Arg Lys Leu Leu Asn Arg Gly Ile Asp Pro Ala Thr His
 1 5 10 15
 Arg Pro Leu Asn Glu Pro Ala Gln Asp Ala Thr Thr Ile Ser Phe Ala
 20 25 30
 Ala Ala Pro Ser Lys Gln Glu Pro Arg Asp Asp Ala Ile Ala Ala Ala
 35 40 45
 Leu Gly Tyr Lys Asn Glu Asn Asn Pro Thr Thr Thr Ala Ala Thr Val
 50 55 60
 Gln Glu Lys Cys Pro Asp Leu Asn Leu Glu Leu Arg Ile Ser Pro Pro
 65 70 75 80
 Cys Gln Gln Gln His Gln Pro Asp Ala Ser Met Gly Met Val Glu Gly
 85 90 95
 Asn His Cys Phe Ala Cys Ser Leu Gly Leu Gln Asn Ser Lys Glu Cys
 100 105 110
 Ser Cys Arg Arg Gly Ala Ser Gly Gly Ser Ser Ala His Gly Gly Tyr
 115 120 125
 Asp Phe Leu Gly Leu Lys Thr Ser
 130 135

<210> 2190
 <211> 109
 <212> PRT
 <213> Eucalyptus grandis

<400> 2190
 Met Glu Phe Pro Ser Glu Phe Ser Glu Ala Ser Ser Gln Lys Arg Ile
 1 5 10 15
 Gly Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn
 20 25 30
 Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 35 40 45
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe

Ser 50 Pro 55 Gly 60 Arg 70 Leu 75 Tyr 80 Glu 85 Ala 90 Asn 95 Ser Thr Val Arg Gly
 65 Thr Ile Glu Arg Tyr Lys Lys Ala Ser Ser Asp Ser Ser Thr Ser His
 Ser Pro Phe Pro 85 Glu 90 Val 95 Glu His Ser Ser Phe Ile Gln
 100 105

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<210> 2191
<211> 116
<212> PRT
<213> Eucalyptus grandis
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[illegible]

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<210> 2192
<211> 98
<212> PRT
<213> Eucalyptus grandis
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<400> 2192															
Met	Ala	Arg	Gly	Lys	Val	Gln	Met	Lys	Arg	Ile	Glu	Asn	Pro	Val	His
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Cys	Lys	Arg	Arg	Ala	Gly	Leu	Leu	Lys	Lys	Ala
			20					25					30		
Lys	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Asp	Ile	Gly	Leu	Phe	Ile	Phe
			35				40					45			
Ser	Pro	His	Gly	Lys	Leu	Tyr	Glu	Leu	Ala	Thr	Lys	Gly	Thr	Met	Lys
						55					60				
Gly	Leu	Ile	Glu	Arg	Tyr	Met	Lys	Thr	Thr	Gln	Ser	Gln	Ala	Ala	Leu
65					70					75					80
Thr	Glu	Glu	Ala	Thr	Pro	Ser	Gln	Pro	Leu	Asp	Ala	Lys	Glu	Glu	Ile
					85					90				95	
Asn Ile															

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<210> 2193
<211> 198
<212> PRT
<213> Eucalyptus grandis
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<400> 2193
Met Gly Arg Gly Lys Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn
1 5 10 15
Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala

```

                20                25                30
Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
   35                40                45
Ser Asn Arg Gly Lys Leu Tyr Glu Phe Cys Ser Ser Ser Met Met
   50                55                60
Lys Thr Ile Glu Lys Tyr Gln Lys Cys Ser Tyr Gly Ser Leu Glu Thr
   65                70                75                80
Asn Cys Ser Ile Asn Glu Met Gln Asn Ser Tyr Gln Asp Tyr Leu Lys
   85                90                95
Leu Lys Thr Arg Val Glu Val Leu Gln Arg Ser Gln Arg Asn Leu Leu
   100                105                110
Gly Glu Glu Leu Gly Pro Leu Asn Ser Lys Glu Leu Glu Gln Leu Glu
   115                120                125
His Gln Leu Glu Asn Ser Leu Lys Gln Ile Arg Ser Ala Lys Thr Gln
   130                135                140
Phe Met Phe Asp Gln Leu Ala His Leu Gln His Lys Glu Gln Met Leu
   145                150                155                160
Val Glu Ala Asn Arg Glu Leu Arg Lys Lys Leu Glu Glu Ser Asn Thr
   165                170                175                180
Arg Ile Pro Leu Arg Leu Gly Trp Glu Ala Glu Asp His Asn Ile
   180                185                190
Ser Tyr Ser Arg Leu Pro
   195

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<210> 2194
 <211> 153
 <212> PRT
 <213> Eucalyptus grandis

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<400> 2194
Met Arg Lys Pro Cys Cys Asp Lys Arg Asp Thr Asn Lys Gly Ala Trp
   1                5                10                15
Ser Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Lys His Gly
   20                25                30
Glu Gly Ser Trp Arg Thr Leu Pro Gln Ala Ala Gly Leu Leu Arg Cys
   35                40                45
Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu
   50                55                60
Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile Ile Lys Leu
   65                70                75                80
His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu Pro
   85                90                95
Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser His Leu Arg
   100                105                110
Arg Lys Leu Leu Lys Met Gly Ile Asp Pro Asn Asn His Arg Leu Asn
   115                120                125
Gln Asn Leu Pro Arg Ser Gln Thr Arg Met Pro Arg Gln His Phe Leu
   130                135                140
Ile Gln Tyr Glu Asp His Met Thr Leu
   145                150

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<210> 2195
 <211> 104
 <212> PRT
 <213> Eucalyptus grandis

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<400> 2195
Glu Ala Leu Gln Gln Ser Leu Val Asp Thr Leu Ser Ser Thr Thr Leu
   1                5                10                15
Ser Pro Thr Gly Ser Gly Asn Val Ala Glu Tyr Met Gly Gln Met Ala
   20                25                30

```

Ile Ala Met Gly Lys Leu Ala Thr Leu Glu Asn Phe Val His Gln Ala
 35 40 45
 Asp Leu Leu Arg Gln Gln Thr Leu Gln Gln Met His Arg Ile Leu Thr
 50 55 60
 Thr Arg Gln Ala Ala Arg Ala Leu Leu Val Ile Asn Asp Tyr Ile Ser
 65 70 75 80
 Arg Leu Arg Ala Leu Ser Ser Leu Trp Leu Ala Arg Pro Arg Thr Glu
 85 90 95
 Asn Ile Cys Ser Ala Lys Leu Phe
 100

<210> 2196
 <211> 25
 <212> PRT
 <213> Eucalyptus grandis

<400> 2196
 Asp Pro Leu Met Lys Pro Trp Gln Ile Pro Cys Pro Ile Gln Pro Ile
 1 5 10 15
 Ile Ala Ser Ala Asp Leu Phe Glu Cys
 20 25

<210> 2197
 <211> 87
 <212> PRT
 <213> Eucalyptus grandis

<400> 2197
 Met Gly Arg Arg Lys Ile Glu Ile Gln Pro Ile Thr His Glu Arg Asn
 1 5 10 15
 Arg Ser Val Thr Phe Leu Lys Arg Lys Asn Gly Leu Phe Lys Ala
 20 25 30
 Tyr Glu Leu Gly Val Leu Cys Ser Val Asp Val Ala Val Ile Ile Phe
 35 40 45
 Glu Asp Arg Pro Gly His Ser Pro Lys Leu Tyr Gln Tyr Ser Ser Arg
 50 55 60
 Gly Ile Gln Asp Ile Val Gln Arg His Leu His His Asp Gly Glu Thr
 65 70 75 80
 Asp Asn Arg Gly Pro Gly Asp
 85

<210> 2198
 <211> 107
 <212> PRT
 <213> Eucalyptus grandis

<400> 2198
 Arg Asp Arg Thr Phe Leu Val Gly Leu Glu Lys Leu Gly Lys Gly Asp
 1 5 10 15
 Trp Arg Gly Ile Ser Arg Ser Tyr Val Thr Thr Arg Thr Pro Ala Gln
 20 25 30
 Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg Gln Val Ser Phe Asn
 35 40 45
 Lys Lys Lys Arg Arg Ser Ser Leu Phe Asp Met Val Lys Asn Gln Cys
 50 55 60
 Ser Tyr Lys Leu Leu Pro Ser Tyr Arg Leu Ser Ser Ile Ser Leu Met
 65 70 75 80
 Gly Phe Asp Lys Phe Leu Leu Tyr Lys Val Asp Val Lys Thr Ala Ala
 85 90 95
 Gly Asp Arg Leu Gly Ser Leu Thr Ala Lys Pro
 100 105

<210> 2199
 <211> 107
 <212> PRT
 <213> Eucalyptus grandis

<400> 2199
 Met Thr Leu Glu Phe Leu Val Arg Ala Gly Val Val Arg Glu Asp
 1 5 10 15
 Thr Gln Met Met Ala Arg Pro Gly Asp Asn Gly Val His Glu Glu Met
 20 25 30
 Ser Gln Phe Thr Ser Asn Gly Leu Ala Ser Ser Ala Ala Ala Gly Asn
 35 40 45
 Asp Phe Ile Phe Ser Ser Lys Pro Ala Gly Ser Ser Leu Asp Phe Ile
 50 55 60
 Gly Thr Arg Pro Thr Gln Leu Gln Gln Pro Gln Pro Gln Pro Leu
 65 70 75
 Glu Pro Pro Ala Pro Leu Phe Pro Lys Pro Glu Thr Val Ser Phe Ala
 85 90 95
 Thr Ser Val His Leu Pro Asn Thr Ala Ser Tyr
 100 105

<210> 2200
 <211> 150
 <212> PRT
 <213> Eucalyptus grandis

<400> 2200
 Ala Asn Ala Pro Leu Arg Ile Ala Met Asn Ser Asn Ala Ser Ser Asn
 1 5 10 15
 Pro Gln Ser Met Ala Thr Ser Thr Thr Ser Ala Thr Thr Pro Ala Ala
 20 25 30
 Gly Gly Asp Gly Gly Lys Lys Val Arg Lys Pro Tyr Thr Ile Thr Lys
 35 40 45
 Ser Arg Glu Ser Trp Thr Glu Glu His Asp Lys Phe Leu Glu Ala
 50 55 60
 Leu Gln Leu Phe Asp Arg Asp Trp Lys Lys Ile Glu Asp Phe Val Gly
 65 70 75 80
 Ser Lys Thr Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu
 85 90 95
 Lys Val Gln Lys Asn Gly Ala Val Ala His Val Pro Pro Pro Arg Pro
 100 105 110
 Lys Arg Lys Ala Ala His Pro Tyr Pro Gln Lys Ala Ser Lys Asn Val
 115 120 125
 Leu Val Pro Leu Gln Ala Ser Met Ala Gln Pro Ser Ser Thr Asn Pro
 130 135 140
 Ala Phe Thr Ile Thr Pro
 145 150

<210> 2201
 <211> 171
 <212> PRT
 <213> Eucalyptus grandis

<400> 2201
 Met Gly Arg Ser Pro Cys Cys Glu Ser Glu His Met Asn Lys Gly Ala
 1 5 10 15
 Trp Ser Lys Glu Glu Asp Glu Arg Leu Ile Ala Tyr Ile Lys Arg His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45

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Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
  50          55          60
Leu Lys Arg Gly Asn Phe Ser Asp Glu Glu Asp Glu Leu Ile Ile Thr
  65          70          75          80
Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Ala Arg Leu
  85          90          95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile
  100          105          110
Lys Arg Lys Leu His Ala Arg Gly Ile Asp Pro Gln Thr His Arg Pro
  115          120          125
Leu Arg Leu His Gln His Cys Trp Cys Cys His Phe Thr
  130          135          140
Leu Ser Val Leu Thr Leu Thr Thr Ala Ala Thr Arg Pro Arg Leu Thr
  145          150          155          160
Arg Arg Leu Val Lys Asn Tyr His His His Gln
  165          170

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<210> 2202
<211> 98
<212> PRT
<213> Eucalyptus grandis

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<400> 2202
Met Asn Ser Pro Leu Ala Gln Leu Val Asn Pro Arg Arg Met His Thr
  1          5          10          15
Tyr Glu Pro Phe Asp Gln Phe Pro Met Trp Gly Asp Thr Phe Lys Ala
  20          25          30
Asp Lys Val Lys Asn Leu Glu Ala Ser Ser Ser Val Ile Val His Ala
  35          40          45
Val Asp Asp Gly Leu Asp Lys Lys Phe Glu Tyr Val Ser His Glu Ser
  50          55          60
Ala Glu Asn Ser Ser Ser Arg Ser Asp Gln Glu Ala Asn Arg Pro Asp
  65          70          75          80
Lys Val Gln Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser
  85          90          95
Arg Leu

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<210> 2203
<211> 111
<212> PRT
<213> Eucalyptus grandis

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<400> 2203
Met Asn Ser Pro Leu Ala Gln Leu Val Asn Pro Arg Arg Met His Thr
  1          5          10          15
Tyr Glu Pro Phe Asp Gln Phe Pro Met Trp Gly Asp Thr Phe Lys Ala
  20          25          30
Asp Lys Val Lys Asn Leu Glu Ala Ser Ser Ser Val Ile Val His Ala
  35          40          45
Val Asp Asp Gly Leu Asp Lys Lys Phe Glu Tyr Val Ser His Glu Ser
  50          55          60
Ala Glu Asn Ser Ser Ser Arg Ser Asp Gln Glu Ala Asn Arg Pro Asp
  65          70          75          80
Lys Val Gln Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser
  85          90          95
Arg Leu Arg Lys Lys Lys Tyr Val Gln Gln Leu Glu Ser Ser Arg
  100          105          110

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<210> 2204
<211> 162

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<212> PRT
 <213> Eucalyptus grandis

<400> 2204
 Met Ala Ser Ser Ser Val Ala Ser Ala Arg Lys Asp Ala Asp Arg
 1 5 10 15
 Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp Glu Ala Leu Gln Arg Leu
 20 25 30
 Val Gln Ser Tyr Gly Pro Arg Asn Trp Ser Leu Ile Ser Lys Ser Ile
 35 40 45
 Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu
 50 55 60
 Ser Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Glu Ala
 65 70 75 80
 Ile Val Arg Ala His Ala Arg Phe Gly Asn Lys Trp Ala Thr Ile Ala
 85 90 95
 Arg Leu Leu Asn Gly Arg Thr Asp Asn Ala Val Lys Asn His Trp Asn
 100 105 110
 Ser Thr Leu Lys Arg Lys Cys Ser Ser Thr Cys Ser Ala Gly Gly Asp
 115 120 125
 Asp Ala Asp Ala Leu Ala Glu Gln Gln Pro Leu Lys Arg Ser Ala Ser
 130 135 140
 Leu Gly Thr Pro Thr Gly Gly Asn Asn Ala Val Ser Asp Leu Phe Phe
 145 150 155 160
 Ser Pro

<210> 2205
 <211> 92
 <212> PRT
 <213> Eucalyptus grandis

<400> 2205
 Met Ala Lys Glu Lys Ile Lys Ile Lys Lys Ile Asp Asn Leu Thr Ala
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Arg Gly Leu Ile Lys Lys Ala
 20 25 30
 Glu Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ser Leu Ile Val Phe
 35 40 45
 Ser Ala Thr Gly Lys Leu Tyr Asp Phe Ser Ser Ser Arg Gln Met Lys
 50 55 60
 Gly Glu Asp Leu Glu Gly Leu Asn Val Glu Glu Leu Asp Gln Leu Glu
 65 70 75 80
 Lys Lys Leu Glu Ala Gly Leu Ser Leu Val Ile Lys
 85 90

<210> 2206
 <211> 148
 <212> PRT
 <213> Eucalyptus grandis

<400> 2206
 Met Arg Lys Pro Asp Ala Ser Gly Lys Asn Ser Ser Asn Ser Asn Ala
 1 5 10 15
 Asn Lys Leu Arg Lys Gly Leu Trp Ser Pro Glu Glu Asp Asp Lys Leu
 20 25 30
 Met Asn Tyr Met Leu Asn Asn Gly Gln Gly Cys Trp Ser Asp Val Ala
 35 40 45
 Arg Asn Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp
 50 55 60
 Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Ala Phe Ser Pro Gln

```

65              70              75              80
Glu Glu Glu Leu Ile Ile His Leu His Ser Ile Leu Gly Asn Arg Trp
      85
Ser Gln Ile Ala Ala Arg Leu Pro Gly Arg Thr Asp Asn Glu Lys Lys
      100
Asn Phe Trp Asn Ser Thr Ile Lys Lys Arg Ser Arg Thr Arg His His
      115
Leu Leu Val Asp Thr Arg Gln Thr Arg Ala Ile Leu Leu Ala Ser Asp
      130
Val Lys Asp Val
145

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<210> 2207
<211> 73
<212> PRT
<213> Eucalyptus grandis

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<400> 2207
Ala Pro Glu Ile Ala Pro Pro Leu Ala Ala Pro Arg Gly Gly His His
1      5      10      15
Arg Arg Ala His Ser Glu Val Asn Phe Arg Ile Pro Glu Asp Leu Asp
      20
Leu Gly Pro Asp Pro Phe Glu Asn Gly Pro Ser Gly Ser Phe Glu Asp
      35
Phe Gly Ser Glu Asp Asp Leu Ser Thr Tyr Met Asp Ile Glu Lys
      50
Phe Gly Ser Ser Ser Thr Arg Ala Gly
      65
      70

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<210> 2208
<211> 147
<212> PRT
<213> Eucalyptus grandis

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<400> 2208
Ser Glu Asn Val Ser Gly Gly Ala Ile Glu Arg Pro Arg Ala Thr Gly
1      5      10      15
Lys Leu Ala Ala Pro Val Asn Ser Pro Ser Met Ser Ser Ser Leu Asp
      20
Leu Lys Asn Ser Cys Met Asp Ala Asn Ala Asn Pro Val Ser Ile Leu
      35
Gln Pro Gly Val Val Pro Pro Glu Ala Trp Leu Gln Val Met Ser Leu
      50
Cys Gly Arg Leu Leu Lys Ile Phe Pro Trp Lys Ala Ser Thr Ser Val
      65
Leu Ser Ala Val Ser Ser Ser Cys Ser Leu Gln Tyr His Arg Leu Cys
      85
Phe Ser Lys Phe Ala Leu Cys Lys Asn Glu Arg Glu Leu Lys Arg Glu
      100
Arg Arg Lys Gln Ser Asn Arg Glu Ser Ala Arg Arg Ser Arg Leu Arg
      115
Lys Gln Ala Glu Thr Glu Glu Leu Gly Lys Lys Val Asp Ser Leu Ser
      130
Ala Glu Asn
145

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<210> 2209
<211> 115
<212> PRT
<213> Eucalyptus grandis

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<400> 2209

Phe Phe Leu Tyr Ile Ile Ser Leu Phe Leu Val Arg Glu Asn Ser Glu
 1 5 10 15
 Arg Ser Arg Glu Gly Thr Ser Ser Asn Gly Asp Gly Lys Ser Glu Val
 20 25 30
 Gln Gly Lys Val Ala Gly Glu Val Asp Ala Ala Ser Glu Asn Val Ser
 35 40 45
 Gly Gly Ala Ile Glu Arg Pro Arg Ala Thr Gly Lys Leu Ala Ala Pro
 50 55 60
 Val Asn Ser Pro Ser Met Ala Ser Ser Leu Asp Leu Lys Asn Ser Cys
 65 70 75
 Met Asp Ala Asn Ala Asn Pro Val Ser Ile Leu Gln Pro Gly Val Val
 85 90 95
 Pro Pro Glu Ala Trp Leu Gln Asn Glu Arg Glu Leu Lys Arg Glu Arg
 100 105 110
 Arg Glu Gln
 115

<210> 2210

<211> 192

<212> PRT

<213> Eucalyptus grandis

<400> 2210

Met Gly Arg Gln Pro Cys Cys Asp Lys Ser Gly Val Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Ala Glu Glu Asp Lys Lys Leu Ile Asn Phe Ile Leu Thr Asn
 20 25 30
 Gly His Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Leu Leu Ser Glu Ala Glu Glu Gln Leu Val Ile Asp
 65 70 75 80
 Leu His Ala Arg Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr His Ile
 100 105 110
 Lys Lys Lys Leu Leu Lys Met Gly Ile Asp Pro Val Thr His Glu Pro
 115 120 125
 Leu Asn Lys Pro Gln Lys Thr Pro Ser Glu His Asp Pro Glu Ala Ser
 130 135 140
 Leu Ser Ser Ser Gln Ala Asp Pro Thr Ser Glu Ser Pro Ala Asn Thr
 145 150 155 160
 His Gln Pro Asn Asn Ala His Ala Asp Glu Val Gln Leu Val Leu Val
 165 170 175
 Leu Pro Val Gly Leu Val Arg Arg Glu Leu Leu Leu Arg Gln Gly Arg
 180 185 190

<210> 2211

<211> 89

<212> PRT

<213> Pinus radiata

<400> 2211

Leu Ser Arg Asn Met Asp Asp Val Phe Val Gln Arg Cys Asn Arg Asn
 1 5 10 15
 Phe Thr Ala Arg Asp Arg Leu Ile Ser Lys Glu Arg Arg Asn Phe Gly
 20 25 30
 Trp Val Cys Gly Val Thr Glu Glu Glu Glu Leu Ile Ile Arg Met
 35 40 45

Tyr Lys Leu Val Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu Pro
 50 55 60
 Gly Arg Lys Ala Glu Glu Ile Glu Arg Tyr Trp Lys Met Arg Ser Ile
 65 70 75 80
 Asn Ala Ala Pro Leu Lys Pro Asn Thr
 85

<210> 2212
 <211> 237
 <212> PRT
 <213> Pinus radiata

<400> 2212
 Met Val Lys Glu Leu Leu Met Met Cys Ser Asn Cys Gly His Ser Gly
 1 5 10 15
 His Ser Ser Arg Ala Cys Pro Asp Arg Gly Ser Val Lys Leu Phe Gly
 20 25 30
 Val Arg Leu Ile Ala Thr Asp Asp Gly Met Ala Cys Met Arg Lys Ser
 35 40 45
 Leu Ser Met Gly Asn Leu Gly His Tyr Arg Ser Leu Tyr Asn Val Asn
 50 55 60
 His Cys Ser Gly Thr Ser Glu Cys Gly Ser Ala Asp Gln Asp Gly Tyr
 65 70 75 80
 Leu Ser Asp Gly Phe Val His Ser Ser Ser Asn Ala Arg Glu Arg Lys
 85 90 95
 Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr Gly
 100 105 110
 Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn Phe
 115 120 125
 Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr
 130 135 140
 Phe Leu Arg Gln Ser Asn Leu Asn Lys Arg Lys Arg Arg Ser Ser Leu
 145 150 155 160
 Phe Asp Met Cys Pro His Asp Ser His Val Thr Ser Ser Phe Arg Arg
 165 170 175
 Glu Asp Ser Leu Gly Asn Leu Tyr Glu Phe Ser Pro Lys His Ser Ala
 180 185 190
 Leu Gly Val Ser Pro Asn Phe Glu Leu Tyr Ser Phe Gly Val Ser Pro
 195 200 205
 Thr Leu Ser Leu Gly Arg Ser Leu Gln Pro Val Glu Ala Val Leu Glu
 210 215 220
 Glu Lys Ala Ala His Tyr His Pro Val Asn Ser Glu Glu
 225 230 235

<210> 2213
 <211> 55
 <212> PRT
 <213> Pinus radiata

<400> 2213
 Trp Leu Gln Leu Cys Ser Gly Ile Asp Glu His Ala Ala Gly Phe Cys
 1 5 10 15
 Ser Gln Leu Val Phe Ala Pro Ile Asp Ala Ser Phe Ala Asp Ala
 20 25 30
 Pro Leu Ala Pro Ser Gly Phe Arg Val Ile Pro Leu Glu Ser Gly Ser
 35 40 45
 Glu Cys Phe Ser Ser Lys Thr
 50 55

<210> 2214
 <211> 119

<212> PRT

<213> Pinus radiata

<400> 2214

Gly Val Leu Lys Phe Pro Cys Phe Asp Leu Ile Thr Met Asn Leu Met
 1 5 10 15
 Glu Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg Arg Thr Val Arg
 20 25 30
 Gly Lys Thr Gln Leu Lys Arg Ile Glu Asn Gly Thr Ser Arg Gln Val
 35 40 45
 Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu
 50 55 60
 Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe Ser Pro Arg
 65 70 75 80
 Gly Lys Leu Tyr Glu Phe Ala Asn Pro Ser Met Gln Lys Met Leu Glu
 85 90 95
 Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asn Pro Thr Ser Thr Ala Lys
 100 105 110
 Glu Gln Asp Val Gln Cys Leu
 115

<210> 2215

<211> 146

<212> PRT

<213> Pinus radiata

<400> 2215

Pro Lys Gln Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His Gly His
 1 5 10 15
 Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Leu Leu Arg Cys Gly
 20 25 30
 Lys Ser Cys Arg Leu Arg Trp Ala Asn Tyr Leu Arg Pro Asp Ile Lys
 35 40 45
 Arg Gly Lys Phe Thr Val Gln Glu Glu Gln Thr Ile Ile Gln Leu His
 50 55 60
 Ala Leu Leu Gly Asn Arg Trp Ser Ala Ile Ala Thr His Leu Pro Lys
 65 70 75 80
 Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu Lys Lys
 85 90 95
 Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His Lys Pro Lys Ser
 100 105 110
 Glu Ser Ile Met Val Pro Gly Val Gln Ser Ser Asn Gly Ser Ser Asn
 115 120 125
 Leu Ser His Met Ala Gln Trp Glu Ser Ala Arg Leu Glu Ala Glu Ser
 130 135 140
 Lys Ala
 145

<210> 2216

<211> 106

<212> PRT

<213> Pinus radiata

<400> 2216

Gly Ile Phe Ile Gly Gly Ser Cys Val Gly Gly Asp Gln Ser His Ser
 1 5 10 15
 Met Ser Gly Asn Gly Ala Leu Ala Phe Asp Met Glu Tyr Ala Arg Trp
 20 25 30
 Leu Asp Glu His His Arg Gln Ile Asn Glu Leu Arg Ser Ala Val Asn
 35 40 45
 Ser His Val Gly Asp Asn Glu Leu Arg Gly Leu Val Glu Gly Val Met


```

1           5           10           15
Pro Lys Ala Ala Gly Leu Pro Arg Cys Gly Lys Ser Cys Arg Leu Arg
20           25           30
Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu
35           40           45
Glu Glu Asp Glu Leu Ile Ile Lys Leu His Ser Val Val Gly Asn Lys
50           55           60
Trp Ser Leu Ile Ala Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile
65           70           75           80
Lys Asn Tyr Trp Asn Thr His Ile Lys Arg Lys Leu Leu Ile Lys Gly
85           90           95
Ile Asp Pro Gln Ser His Arg Pro Leu Gly Gln Pro Tyr Ser Ser Asn
100          105          110
Asn Met Pro Val Ser Arg Leu Phe Leu Thr Ser
115          120

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<210> 2220
<211> 176
<212> PRT
<213> Pinus radiata

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<400> 2220
Leu Ser Asn Ile Glu Pro Lys Gln Ile Lys Val Trp Phe Gln Asn Arg
1           5           10           15
Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser Arg Leu Gln Thr Val
20           25           30
Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu Met Glu Glu Asn Asp
35           40           45
Arg Leu Gln Lys Gln Val Ser Gln Leu Val Tyr Glu Asn Gly Tyr Met
50           55           60
Arg Gln Gln Leu Gln Asn Ala Ser Val Ala Ala Thr Asp Thr Ser Cys
65           70           75           80
Glu Ser Val Val Thr Ser Gly Gln His Asn Pro Thr Pro Gln
85           90           95
His Pro Pro Arg Asp Ala Ser Pro Ala Gly Leu Leu Ser Ile Ala Glu
100          105          110
Glu Thr Leu Thr Glu Phe Leu Ser Lys Ala Lys Gly Ala Ala Val Asp
115          120          125
Trp Val Gln Met Pro Gly Met Lys Pro Gly Pro Asp Ser Ile Gly Ile
130          135          140
Val Ala Ile Ser Asn Thr Cys Asn Gly Val Ala Ala Arg Ala Cys Gly
145          150          155          160
Leu Val Gly Leu Asp Pro Thr Lys Val Ala Glu Ile Leu Lys Asp Arg
165          170          175

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<210> 2221
<211> 119
<212> PRT
<213> Pinus radiata

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<400> 2221
Leu Tyr Gln Cys Gln Ala Leu Phe Glu Asn Gly Ala Val Glu Lys Leu
1           5           10           15
Ser Arg Thr Tyr Asn Asp Leu Tyr Asp Asp Leu Lys Glu Glu Ile Leu
20           25           30
Ser Trp Leu Pro Val Glu Cys Val Cys Arg Phe Arg Ser Val Ser Lys
35           40           45
Gln Trp Asn Asn Leu Leu Ser Ser His Asn Phe Ile Lys Lys Val Trp
50           55           60
Arg Lys Lys Pro Ala Asn Met Asn Pro Trp Leu Val Leu His Pro Val
65           70           75           80

```

Asn Ser Ser Tyr Cys Leu Ala Tyr Cys Phe Phe Thr Arg Thr Trp Lys
 85 90 95
 Thr Thr Ser Ser Ile Ser Ile Glu Asn Ala Asn Asn Tyr Gly Glu Asn
 100 105 110
 Gly Ile Leu Gly Ile Ser Cys
 115

<210> 2222
 <211> 124
 <212> PRT
 <213> Pinus radiata

<400> 2222
 Asp Lys Lys Leu Ile Asn Phe Leu Thr Thr His Gly Gln Cys Cys Trp
 1 5 10 15
 Arg Thr Val Pro Glu Leu Ala Gly Ile Ser Arg Cys Gly Lys Ser Cys
 20 25 30
 Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Val
 35 40 45
 Phe Ser Glu Ser Glu Glu Lys Leu Ile Leu Asp Leu His Ser Arg Val
 50 55 60
 Gly Asn Arg Trp Ser Lys Ile Ala Ser Phe Leu Pro Gly Arg Thr Asp
 65 70 75
 Asn Glu Leu Lys Asn Tyr Trp Asn Thr His Ile Lys Lys Lys Leu Lys
 85 90 95
 Arg Met Gly Leu Asp Pro Gly Asp Ala Gln Ala Ile Ser Glu Thr Leu
 100 105 110
 Pro Gln Pro Ala Pro Val Ala Glu Asn Asn Asp Val
 115 120

<210> 2223
 <211> 175
 <212> PRT
 <213> Pinus radiata

<400> 2223
 Met Lys Gly Lys Ser Pro Gly His Asp Glu Pro Asp Arg Ile Lys Gly
 1 5 10 15
 Pro Trp Ser Pro Glu Glu Asp Ala Ala Leu Gln His Phe Val Gln Lys
 20 25 30
 Tyr Gly Pro Arg Asn Trp Ser Leu Ile Ser Lys Ala Ile Pro Gly Arg
 35 40 45
 Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln
 50 55 60
 Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Ala Thr Ile Val Arg
 65 70 75 80
 Ala His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg Met Leu
 85 90 95
 Ser Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu
 100 105 110
 Arg Arg Arg Cys Gln Gly Gly Gly Ala Leu Val Ile Asp Asp Glu Ile
 115 120 125
 Ser Ser Gly Ala Asp Gly Phe Arg Lys Arg Asn Leu Ser Glu Asp Ala
 130 135 140
 Asp Ala Ser Arg Lys Phe Lys Lys Leu Ser Leu Gly Thr Thr Thr Thr
 145 150 155 160
 Thr Thr Thr Thr Glu Pro Ser Thr Ser Ser Ala Ser Asp Arg Ser
 165 170 175

<210> 2224
 <211> 103

<212> PRT

<213> Pinus radiata

<400> 2224

```

Met Ser Ser Arg Ser Cys Ser Leu Cys Gly Leu Asn Gly His Asn Ser
 1      5      10
Arg Thr Cys Val Gly Ser Gly Val Met Leu Phe Gly Val Arg Leu Thr
 20      25
Asp Gly Pro Met Arg Lys Ser Ala Ser Met Asn Asn Leu Ser Asn Leu
 35      40      45
Ser Gln Tyr Glu His Ser Asp Pro Ala Glu Val Ala Ala Glu Gly Phe
 50      55      60
Asp Gly Tyr Val Ser Asp Asp Leu Val His Ser Ser Ser Asn Ala Arg
 65      70      75      80
Glu Arg Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe
 85      90      95
Leu Val Gly Leu Gln Arg Val
100

```

<210> 2225

<211> 96

<212> PRT

<213> Pinus radiata

<400> 2225

```

Met Ser Ser Arg Ser Cys Ser Leu Cys Gly Leu Asn Gly His Asn Ser
 1      5      10
Arg Thr Cys Val Gly Ser Gly Val Met Leu Phe Gly Val Arg Leu Thr
 20      25
Asp Gly Pro Met Arg Lys Ser Ala Ser Met Asn Asn Leu Ser Asn Leu
 35      40      45
Ser Gln Tyr Glu His Ser Asp Pro Ala Glu Val Ala Ala Glu Gly Phe
 50      55      60
Asp Gly Tyr Val Ser Asp Asp Leu Val His Ser Ser Ser Asn Ala Arg
 65      70      75      80
Glu Arg Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe
 85      90      95

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<210> 2226

<211> 131

<212> PRT

<213> Pinus radiata

<400> 2226

```

Arg Gly Arg Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Ser Arg Gln
 1      5      10
Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Met Lys Lys Ala Ala Glu
 20      25
Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe Ser Asn
 35      40      45
Lys Asp Lys Leu Tyr Glu Phe Ala Ser Ser Ser Met Thr Lys Ile Leu
 50      55      60
Glu Arg Tyr Arg Lys Arg Ser Asn Leu Ile Gln Asp Ile Gly Lys Asp
 65      70      75      80
Pro Gln Asn Ser Asp Ile Glu Leu Thr Arg Leu Lys Glu Glu Val Asp
 85      90      95
Arg Leu Gln Arg Ser Arg Arg His Leu Leu Gly Glu Asp Leu His Gln
100      105      110
Leu Gly Ala Thr Asp Leu Gln His Leu Glu Gln Gln Leu Glu Glu Ala
115      120      125
Leu Gln Lys

```

130

<210> 2227
 <211> 49
 <212> PRT
 <213> Pinus radiata

<400> 2227
 Met Pro Ser Ile Met Glu Lys Gln Asn Ser Gly Glu Asp Ser Asp Ser
 1 5 10 15
 Lys Gly Gln Leu Asp Asn Gly Lys Tyr Val Arg Tyr Thr Asn Glu Gln
 20 25 30
 Val Glu Thr Leu Glu Arg Ala Tyr Asn Glu Cys Ser Lys Pro Ser Thr
 35 40 45
 Arg

<210> 2228
 <211> 128
 <212> PRT
 <213> Pinus radiata

<400> 2228
 Lys Ile Glu Asn Thr Thr Ser Arg Gln Val Thr Phe Cys Lys Arg Lys
 1 5 10 15
 Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu Ser Leu Leu Cys Asp Ala
 20 25 30
 Glu Val Ala Leu Leu Ile Phe Ser Thr Ser Gly Arg Leu Tyr Glu Phe
 35 40 45
 Ala Asn Lys Ser Val Ser Ala Thr Thr Glu Arg Tyr Met Arg Thr Tyr
 50 55 60
 Ala Glu Asn Met Pro Gln Ser Arg Ala Leu Tyr Pro Asp Cys His His
 65 70 75 80
 Trp Gln Glu Glu Val Arg Lys Leu Thr Gln Gln Arg Asp Ser Leu Thr
 85 90 95
 Asn Ser Ile Arg Gln Ile Met Gly Glu Gly Leu Glu Ser Leu Ser Met
 100 105 110
 Lys Glu Leu Lys His Ile Gln Val Gln Leu Glu Lys Ser Ile Ser Cys
 115 120 125

<210> 2229
 <211> 181
 <212> PRT
 <213> Pinus radiata

<400> 2229
 Glu Asp Leu Asp Asp Cys Ile His Pro Pro Glu Lys Lys Arg Arg Leu
 1 5 10 15
 Thr Ala Asp Gln Val Gln Phe Leu Glu Arg Ser Phe Glu Ile Glu Asn
 20 25 30
 Lys Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Glu Leu Gly Leu
 35 40 45
 Gln Pro Arg Gln Val Ala Val Trp Phe Gln Asn Arg Arg Ala Arg Trp
 50 55 60
 Lys Thr Lys Gln Leu Glu Arg Asp Tyr Asp Ile Leu Lys Ser Arg Tyr
 65 70 75 80
 Glu Asn Leu Arg Val Asp Tyr Asp Ser Leu Leu Lys Glu Lys Asp Lys
 85 90 95
 Leu Arg Ala Glu Val Thr Phe Leu Thr Asp Lys Leu His Asp Ser Asp
 100 105 110
 His Glu Ala Leu Thr Lys Asp Ser Glu Ser Ala Asp Lys Lys Val Tyr

115 120 125
 Pro Gln Pro Ala Ser His Ser Asp Cys Val Gly Glu Pro Glu Arg Ser
 130 135 140
 Thr Ala Ala Lys Asp Thr Pro Pro Gly Cys Lys His Glu Asp Leu Leu
 145 150 155 160
 Ser Ser Gly Thr Asp Ser Ser Gly Val Leu Asp Glu Asp Ser Pro His
 165 170 175
 His Val Asp Cys Gly
 180

<210> 2230
 <211> 107
 <212> PRT
 <213> Pinus radiata

<400> 2230
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val Ile Lys
 65 70 75 80
 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
 100 105

<210> 2231
 <211> 125
 <212> PRT
 <213> Pinus radiata

<400> 2231
 Lys Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Gln Phe Leu Met
 1 5 10 15
 Gly Leu Arg Lys Tyr Gly Lys Gly Asp Trp Arg Ser Ile Ser Arg Asn
 20 25 30
 Phe Val Val Ser Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45
 Tyr Tyr Ile Arg Leu Gly Ser Asp Asn Lys Asn Lys Arg Arg Ser Ser
 50 55 60
 Ile His Asp Ile Thr Thr Val His Gly Thr Asp Arg Met Pro Ser Pro
 65 70 75 80
 Leu Leu His Val Ser Asn Arg Gln Thr Asn Ser Pro Ser Thr Gln Ala
 85 90 95
 Glu Met Asn His Ser Pro Cys Leu Asp Ile Ser Ile Ser Asp Phe Thr
 100 105 110
 Arg Thr Ser Asn Lys Leu Phe Gly Thr Ser Asn Arg Trp
 115 120 125

<210> 2232
 <211> 150
 <212> PRT
 <213> Pinus radiata

<400> 2232
 Met Thr Arg Lys Cys Ser His Cys Gly Asn Asn Gly His Asn Ser Arg


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      1           5           10           15
Thr Cys Pro Asn Arg Gly Gly Val Lys Leu Phe Gly Val Arg Leu Thr
      20
Asp Gly Pro Ile Arg Lys Ser Ala Ser Met Gly Asn Leu Met Met Met
      35
Ser Asn Pro Ser Ser Pro Ala Asp Pro Ser Glu Pro Ala Ser Ala Ala
      50
Ala Ala Ala Ala Ala Ala Ala Ser Gly Tyr Leu Ser Asp Gly Leu
      65
Val Glu Ala Ser Thr Ser Ser Asn Ser Arg Glu Arg Lys Lys Gly Val
      85
Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu Gly Leu Gln Lys
      100
Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn Phe Val Ile Thr
      115
Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Ile Arg
      130
Gln Ser Asn Met Thr Arg
      145
      150

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<210> 2233
<211> 102
<212> PRT
<213> Pinus radiata

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<400> 2233
Met Lys Met Ser Leu Pro Ser Asn Val Leu Thr Leu Ser Ala Asp Ser
      1           5           10           15
Asn Ser Asn Ser Asn Ser Ile Ser Ser Ser Gly Asp Glu Leu Ala Ala
      20
Lys Val Arg Lys Pro Tyr Thr Ile Thr Lys Gln Arg Glu Arg Trp Ser
      35
Glu Asp Glu His Leu Lys Phe Leu Glu Ala Leu Lys Met Tyr Gly Arg
      50
Ala Trp Arg Arg Ile Glu Glu His Ile Gly Thr Lys Thr Ala Val Gln
      65
Ile Arg Ser His Ala Gln Lys Phe Phe Ser Lys Leu Val Arg Gly Ser
      85
Ser Asn Lys Gly Val Ser
      100

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<210> 2234
<211> 85
<212> PRT
<213> Pinus radiata

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<400> 2234
Gly Ile Asp Met Asn Arg Gly Pro Ala Thr Asn Glu Ser Glu Tyr Ser
      1           5           10           15
Ser Val Phe Gln Ala Asp Ala Leu Arg Thr Ile Asp Thr Gly Ser Val
      20
Val Val Lys Arg Glu Arg Glu Arg Thr Phe Glu Leu Glu Ala Glu Arg
      35
Asp Arg Thr Cys Asp Val Ser Ser Arg Thr Ser Asp Glu Glu Ile
      50
Gly Ser Thr Arg Lys Lys Leu Arg Leu Ser Lys Glu Gln Ser Ala Leu
      65
Leu Glu Glu Ser Phe
      85

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<210> 2235

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<211> 115
 <212> PRT
 <213> Pinus radiata

<400> 2235
 Asn Leu Glu Ser Leu Thr Leu Lys Glu Leu Gln Gln Leu Glu Lys Gln
 1 5 10 15
 Leu Gly Arg Ala Ile Lys Lys Ile Tyr Asn Lys Lys Met Lys Ile Ile
 20 25 30
 Ser Gln Cys Cys Lys Ser Leu Ser Glu Lys Val Arg Ser Leu Glu Glu
 35 40 45
 Glu Asn Ser Glu Leu Leu Thr Lys Leu Ile Pro Arg Ala Asp Ser Ser
 50 55 60
 Thr Ser Gly Ala Ala Leu Phe Val Asp Thr Ser Met Pro Lys Ser His
 65 70 75 80
 Ser Ala Thr Glu Ala Trp Arg Gln Leu Leu Gln Arg Val Leu Val Thr
 85 90 95
 Ala Ala Lys Met Ala Thr Thr Pro Pro Ala Arg His Ser Asn Ser Arg
 100 105 110
 Pro Asn His
 115

<210> 2236
 <211> 88
 <212> PRT
 <213> Pinus radiata

<400> 2236
 Gly Lys Ala Thr Ser Gly Ser Ala Asn Glu Ala Met Ser Gln Ser Gly
 1 5 10 15
 Asp Ser Gly Ser Asp Gly Ser Ser Glu Gly Ser Glu Glu Tyr Asn Thr
 20 25 30
 Gln Thr Glu Ser Gln Val Ala Arg Lys Arg Ser Phe Asp Gln Met Ile
 35 40 45
 Val Asp Gly Ala Asn Ala Gln Ser Thr Asn Ile Gln Ser Tyr Asn Ser
 50 55 60
 Gln Ala Gly Glu Pro Tyr Val Thr Ser Gly Gly His Ala Met Gly Asn
 65 70 75 80
 Pro Ile Ser Gln Ala Val Ala Ala
 85

<210> 2237
 <211> 66
 <212> PRT
 <213> Pinus radiata

<400> 2237
 Gln Leu Lys Trp Lys Glu Arg Ile Leu Thr Glu Glu Asn Leu Phe Leu
 1 5 10 15
 Arg Lys Lys Cys Gly Asp Glu His Val Asp Cys Ser Ala Phe Arg Thr
 20 25 30
 Pro Pro Ala Gln Leu Arg Ser Ile Gln Asn Ile Asp Val Glu Thr Gln
 35 40 45
 Leu Val Ile Arg Pro Pro Thr Val Gln Gln His Pro Asp Val Asp Ser
 50 55 60
 Pro Arg
 65

<210> 2238
 <211> 176
 <212> PRT

<213> Pinus radiata

<400> 2238

```

Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
1      5      10      15
Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
20     25     30
Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
35     40     45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Asp
50     55     60
Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile Leu Arg
65     70     75     80
Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Met
85     90     95
Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr His Leu
100    105    110
Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro
115    120    125
Leu Ser Glu Ser Glu Asp Ile Cys Ser Ser Pro Gly Asn Ser Glu Val
130    135    140
Ser Arg Lys Ser Gln Arg Glu Asn Asn Ala Glu Ile Pro Arg Lys Val
145    150    155    160
Ala Asp Gly Ala Val Asp Ile Gln Asp Lys Glu Glu Asp Ile Thr Glu
165    170    175

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<210> 2239

<211> 105

<212> PRT

<213> Pinus radiata

<400> 2239

```

Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Thr Ala Asn
1      5      10      15
Arg Gln Val Thr Phe Ser Lys Arg Lys Gly Gly Leu Leu Lys Lys Ala
20     25     30
His Glu Leu Ser Val Leu Cys Asn Ala Glu Ile Ala Leu Ile Val Phe
35     40     45
Ser Asn Thr Gly Lys Leu His Asp Trp Ser Ser Ser Ser Met Lys Lys
50     55     60
Val Met Glu Lys Tyr Gln Lys Ser Asp Gln Gly Leu Gly Leu Met Asp
65     70     75     80
Tyr Gln Gln Gln Gln Leu Leu Cys Glu Met Lys Arg Ile Thr Lys Glu
85     90     95
Asn Glu Ser Leu Arg Ala Arg Leu Arg
100    105

```

<210> 2240

<211> 78

<212> PRT

<213> Pinus radiata

<400> 2240

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Met Ser Asn Gly Arg Leu Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro
1      5      10      15
Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr
20     25     30
Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser
35     40     45
Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val
50     55     60

```

Glu His Arg Pro Phe Thr Pro Ser Glu Asp Ala Ala Ile Leu
65 70 75

<210> 2241
<211> 67
<212> PRT
<213> Pinus radiata

<400> 2241
Met Gly Arg Ala Leu Gly Arg Thr Glu Ile Lys Arg Ile Glu Asn Glu
1 5 10 15
Val Ser Arg Asn Val Ser Phe Arg Lys Arg Arg Arg Gly Leu Leu Lys
20 25 30
Lys Ala Ala Glu Leu Ser Ile Leu Cys Asp Ala Thr Val Gly Val Val
35 40 45
Val Phe Ser Pro Ala Gly Lys Leu Ser Glu Tyr Ala Ser Thr Ser Glu
50 55 60
Gln Met Asp
65

<210> 2242
<211> 131
<212> PRT
<213> Pinus radiata

<400> 2242
Ile Arg Asn Pro Thr Asn Arg His Ser Ser Phe Tyr Lys Arg Lys Gly
1 5 10 15
Gly Leu Leu Lys Lys Ala Phe Glu Leu Ala Val Leu Cys Asp Ala Glu
20 25 30
Val Ala Leu Ile Ile Phe Ser Glu Thr Gly Arg Ile Tyr Glu Phe Ala
35 40 45
Ser His Asp Asp Val Thr Thr Val Leu Ala Lys Tyr Arg Ile Gln Thr
50 55 60
Lys Thr Ala Gly Asn Ala Met Pro Ser Ser Leu Gln Lys Thr Glu Phe
65 70 75 80
Asp Gln Leu Gln Val Arg Met Leu Gln Glu Lys Ile Asp Asn Leu Glu
85 90 95
Lys Thr Lys Lys His Met Val Gly Asp Asn Leu Glu Ser Leu Thr Trp
100 105 110
Lys Glu Leu Gln Gln Val Glu Lys Lys Leu Ser Lys Ala Thr Lys Ile
115 120 125
Ile Val Ala
130

<210> 2243
<211> 29
<212> PRT
<213> Pinus radiata

<400> 2243
Gln Pro Val Ala Pro Glu Ser Ile Val Pro Pro His Gln Pro Pro His
1 5 10 15
Asn Gln Thr Pro Asn Gln Tyr Met Gln Gly Trp Trp Val
20 25

<210> 2244
<211> 107
<212> PRT
<213> Pinus radiata

<400> 2244
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile Ile Lys
 65 70 75 80
 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
 100 105

<210> 2245
 <211> 168
 <212> PRT
 <213> Pinus radiata

<400> 2245
 Thr Ala Glu Glu Asp Arg Lys Leu Val Asn Phe Ile Thr Leu His Gly
 1 5 10 15
 His Gly Cys Trp Arg Glu Val Pro Lys Leu Ala Gly Leu Leu Arg Cys
 20 25 30
 Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Leu
 35 40 45
 Lys Arg Gly Leu Leu Ser Glu Ser Glu Glu Lys Leu Ile Ile Asp Leu
 50 55 60
 His Ala Ala Ile Gly Asn Arg Trp Ser Arg Ile Ala Ala Gln Leu Pro
 65 70 75 80
 Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr Arg Ile Lys
 85 90 95
 Lys Lys Leu Arg Gln Met Gly Ile Asp Pro Val Thr His Lys Pro Leu
 100 105 110
 Thr Gln Met Gln Met Gln Ser Thr Pro Ala Gln Thr Leu Leu Gln
 115 120 125
 Glu Asn Asp Thr Glu Gln Gln Gln Glu Gln His Asn Glu Pro Asp
 130 135 140
 Pro Asp Gln Asn Gln Ser Ser Asn Gly Thr Val Glu Thr Leu Val Ser
 145 150 155 160
 Arg Ala Arg Glu Pro His Asp His
 165

<210> 2246
 <211> 164
 <212> PRT
 <213> Pinus radiata

<400> 2246
 Ser Asp Gly Thr Thr Thr Met Ser Thr Tyr Glu Arg Lys Ala Ser Leu
 1 5 10 15
 Arg Glu Phe Tyr Ala Val Ile Tyr Pro Ser Leu Leu Gln Leu Glu Gly
 20 25 30
 Gly Ile Thr Glu Met Glu Asp Asn Lys Gln Lys Leu Ile Cys Lys Glu
 35 40 45
 Arg Tyr Lys Lys Arg Val Asp Glu Glu Arg Arg His Leu Ser Glu Leu
 50 55 60
 Asp Leu Glu Arg Glu Lys Glu Cys Gly Ile Cys Met Glu Thr Gln Thr
 65 70 75 80

Lys Val Val Leu Pro Asn Cys Ser His Ala Met Cys Leu Asn Cys Tyr
 85 90 95
 Arg Glu Trp His Ala Arg Ser Glu Ser Cys Pro Phe Cys Arg Asp Ser
 100 105 110
 Leu Lys Arg Val Asn Ser Thr Asp Leu Trp Ile Phe Thr Ser Asn Glu
 115 120 125
 Glu Val Val Asp Met Glu Thr Leu Gly Arg Glu Asn Leu Lys Arg Leu
 130 135 140
 Phe Asn Tyr Ile Asp Lys Leu Pro Leu Ile Val Pro Glu Ser Leu Phe
 145 150 155 160
 Tyr Val Tyr Asp

<210> 2247

<211> 414

<212> PRT

<213> Eucalyptus grandis

<400> 2247

Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu
 1 5 10 15
 Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg His Ile Ser Gln Tyr
 20 25 30
 Gly His Gly Cys Trp Ser Ser Val Pro Lys Gln Ala Gly Leu Gln Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Ala Phe Ser Gln Asp Glu Glu Asp Leu Ile Ile Glu
 65 70 75 80
 Leu His Ala Ala Leu Gly Asn Lys Trp Ser Gln Ile Ala Ala Asn Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Leu Trp Asn Ser Cys Leu
 100 105 110
 Lys Lys Lys Leu Arg Gln Arg Gly Ile Asp Pro Val Ser His Arg Pro
 115 120 125
 Leu Ser Glu Val Glu Asn Ser Asp Asp Lys Asp Ala Thr Ser Gly Gln
 130 135 140
 Thr Gln Asp Lys Val Ser Arg Gly Ser Val Glu Leu Leu Ser Gln Leu
 145 150 155 160
 Asn Pro Gln Phe Ser Ser Ser Thr Thr Ala Arg Ser Ser Lys Asn Ser
 165 170 175
 Asn Leu Met Ala Pro Thr Leu Ser Lys Asp Thr Val Ala Asp Gly Phe
 180 185 190
 Val Ser Asn His Gln Glu Asn Ser Met Met Asn Ser Cys Ile Ser Asp
 195 200 205
 Phe Val Asp Asn Phe Ser Leu Gln Gln Leu Asn Tyr Ser Ser Ser Asp
 210 215 220
 Ser Arg Phe Ser Asn Leu Cys Phe Thr Gln Thr Gly Arg Ala His Gly
 225 230 235 240
 Asn Thr Ile Phe Ser Asp Phe Asn Ser Asn Val Ile Ser Ala Ile Ser
 245 250 255
 Pro Pro Ser Ser Asn Ser Leu Phe Pro Thr Ala Ser Met Gly Phe Asn
 260 265 270
 Phe Lys Pro Ser Asn Ala Val Pro Ser Ala Asn Ser Thr Ser Ser Ala
 275 280 285
 Ser Thr Gly Thr Ala Asp Phe His Asn Ser Gly Ser Tyr Phe Gly Asn
 290 295 300
 Ser Leu Val Ser Trp Gly Leu Leu Ala Asp Cys Gly Ser Pro Asp Lys
 305 310 315 320
 Glu Gly Ser Thr Ser Ile His Pro Leu Glu Val His Gln Pro Gly Asp
 325 330 335

Phe Lys Trp Ala Ala Glu Tyr Leu Gln Asn Pro Leu Phe Met Ala Ala
 340 345
 Ala Leu Gln Asn Gln Ala Gln Glu Gln Ser Asn Leu Tyr Asn Gln Ile
 355 360
 Lys Pro Glu Thr Gln Phe Pro Pro Asp His Ser Thr Ser Met Trp
 370 375
 Asp His Leu Gln Gly His Glu Ser Leu Asp Asn Ser Leu Asn Thr Cys
 385 390 395 400
 Gly Lys Asp Ile Gln Arg Leu Thr Ala Leu Leu Gly His Asn
 405 410

<210> 2248

<211> 205

<212> PRT

<213> Eucalyptus grandis

<400> 2248

Met Arg Tyr Pro Ala Pro Ala Pro Ala Ser Arg Gly Lys Ser Thr Ser
 1 5 10 15
 Thr Ala Thr Pro Cys Cys Ser Lys Val Gly Ile Lys Arg Gly Pro Trp
 20 25 30
 Thr Pro Glu Glu Asp Glu Val Leu Ala Ser Tyr Val Arg Arg Glu Gly
 35 40 45
 Glu Gly Arg Trp Arg Thr Leu Pro Lys Arg Ala Gly Leu Gln Arg Cys
 50 55 60
 Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Ser Val
 65 70 75 80
 Lys Arg Gly Gln Ile Ala Pro Asp Glu Glu Asp Leu Ile Leu Arg Leu
 85 90 95
 His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Ile Pro
 100 105 110
 Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu Ser
 115 120 125
 Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro Leu
 130 135 140
 Leu Asn His Asn Pro Ser Ser Ser Leu Ala Ala His Leu Gln Asp Thr
 145 150 155 160
 Tyr Asn Ala Ser Thr Phe Thr Pro Lys Ala Thr Tyr Pro Asn Pro Thr
 165 170 175
 Val Pro Val Glu Glu Thr Gly Asp Glu Asn Asp Leu Lys Val Gly Arg
 180 185 190
 Gln Pro Ala Gly Ser Ala Ser Lys Arg Gly Arg Cys Gln
 195 200 205

<210> 2249

<211> 195

<212> PRT

<213> Eucalyptus grandis

<400> 2249

Met Asp Lys Lys Pro Asp Asp Asp Ser Gly Lys Ser Gln Asp Val Glu
 1 5 10 15
 Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn
 20 25 30
 Tyr Ile Ala Asn His Gly Glu Gly Ser Trp Asn Ser Leu Ala Lys Ala
 35 40 45
 Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn
 50 55 60
 Tyr Leu Arg Pro Asp Val Arg Arg Gly Asn Ile Thr Thr Glu Glu Gln
 65 70 75 80
 Leu Leu Ile Met Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys

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      85              90              95
Ile Ala Lys His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe
      100              105              110
Trp Arg Thr Arg Ile Gln Lys His Ile Lys Gln Ala Glu Ala Phe Ser
      115              120              125
Gly Gln Ser Ser Glu Met Ser Asp Gln Ala Ser Thr Ser His Met Ser
      130              135              140
Ser Met Pro Glu Pro Met Glu Thr Tyr Asp Ser Pro Pro Ser Phe Gln
      145              150              155              160
Gly Asn Asn Asn Met Glu Pro Leu Pro Val Asn Leu Ser Val Glu Ser
      165              170              175              180
Asn Glu Ala Tyr Trp Ser Met Asp Asp Leu Trp Ser Met Gln Leu Leu
      180              185              190
Asn Gly Asp
      195

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<210> 2250
<211> 208
<212> PRT
<213> Eucalyptus grandis

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<400> 2250
Met Asp Lys Lys Pro Cys Tyr Arg Thr Gln Asp Pro Gln Val Arg Lys
  1              5              10              15
Gly Pro Trp Thr Leu Glu Glu Asp Leu Ile Leu Met Asp Tyr Ile Ala
      20              25              30
Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ala Gly Leu
      35              40              45
Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg
      50              55              60
Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu Ile
      65              70              75              80
Ile His Leu Gln Ser Met Trp Gly Asn Arg Trp Ser Glu Ile Ala Lys
      85              90              95
His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg Thr
      100              105              110
Lys Ile Gln Lys His Ile Ile Lys Gln Ser Glu Thr Glu Ile Asn Asp
      115              120              125
Leu Thr Ile Pro Pro Ser Ser Ala Asn Ala Cys Thr Asp His Arg Gly
      130              135              140
Val Ser Ala Ala Asn Thr Ile Glu Ile Ala Cys Ser Pro Pro Ser Asp
      145              150              155              160
Gln Gly Gly Ser Gly Glu Thr Met Leu Ser Ala Leu Pro Pro Ala Gln
      165              170              175              180
Glu Pro Asn Asp Ser Ala Cys Trp Ser Val Glu Asp Leu Trp Pro Ile
      180              185              190
Gln Ser Leu Ile Ser Gly Met Gly Asp Asp Ala Gln Tyr Tyr Ser Val
      195              200              205

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<210> 2251
<211> 147
<212> PRT
<213> Eucalyptus grandis

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<400> 2251
Met Asn Ser Thr Thr Thr Gln Phe Val Ser Ser Arg Arg Met Gly Met
  1              5              10              15
Tyr Asp Pro Ile His Gln Ile Gly Met Trp Asp Glu Asn Phe Lys Gln
      20              25              30
Asn Gly Asn Pro Asn Ala Pro Pro Ala Leu Ile Ile Pro Met His Ala
      35              40              45

```



```

Asn Leu Asp Asn Gln Ser Glu Asp Thr Ser His Gly Ser Gln Asp Thr
  50          55          60
Ala Gly Lys Tyr Glu Gln Glu Thr Ser Lys Pro Tyr Asp Lys Val Gln
  65          70          75          80
Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser Arg Leu Arg
      85          90          95
Lys Lys Ala Tyr Val Gln Gln Leu Glu Ala Ser Arg Leu Lys Leu Met
      100          105          110
Gln Leu Glu Gln Glu Val Asp Arg Ala Arg Gln Gln Gly Val Tyr Met
      115          120          125
Ala Ser Gly Val Asp Ser Ala Tyr Pro Gly Tyr Gly Gly Cys Leu Asn
      130          135          140
Ser Gly Ile
145

```

```

<210> 2252
<211> 43
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2252
Met Met Ala Val Thr Ser Ala Cys Lys Asp Lys Met Gly Ile Asp Asn
  1          5          10          15
Gly Lys Tyr Val Arg Tyr Thr Pro Glu Gln Val Glu Ala Leu Glu Arg
      20          25          30
Leu Tyr His Glu Cys Pro Lys Pro Ser Ser Leu
      35          40

```

```

<210> 2253
<211> 54
<212> PRT
<213> Pinus radiata

```

```

<400> 2253
Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
  1          5          10          15
Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
      20          25          30
Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Cys Leu Pro
      35          40          45
Ala Leu Cys Phe Leu Asn
      50

```

```

<210> 2254
<211> 66
<212> PRT
<213> Pinus radiata

```

```

<400> 2254
Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro
  1          5          10          15
Trp Thr Pro Glu Glu Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His
      20          25          30
Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Asp Tyr Glu
      35          40          45
Phe Ile Phe Ser Ser Arg Thr Cys Lys Lys Phe Ser Val Phe Leu Phe
      50          55          60
Phe Gly
      65

```

```

<210> 2255

```

<211> 67
 <212> PRT
 <213> Pinus radiata

<400> 2255
 Met Gly Arg Ser Pro Cys Cys Ala Lys Glu Gly Leu Asn Arg Gly Ala
 1 5 10 15
 Trp Thr Lys Thr Glu Asp Ile Ile Leu Ser Glu Tyr Ile Arg Ile His
 20 25 30
 Gly Asp Gly Gly Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Lys Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp
 50 55 60
 Ile Lys Arg
 65

<210> 2256
 <211> 226
 <212> PRT
 <213> Pinus radiata

<400> 2256
 Met Gly Arg Ala Pro Cys Cys Ser Asn Asp Asp Arg Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile Leu Lys
 65 70 75 80
 Leu His Ala Leu Leu Gly Asn Asn Arg Trp Ser Leu Ile Ala Gly Arg
 85 90 95
 Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Ser His
 100 105 110
 Leu Lys Arg Lys Leu Ile Ser Met Gly Ile Asp Pro Leu Thr His Arg
 115 120 125
 Pro Phe Gln Lys Thr Ser His His His Pro Ser Pro Pro Gln Asn Val
 130 135 140
 Arg Glu Ala Glu Thr Thr Pro Ser Ile Gly Ile Val Gln Asp Phe Phe
 145 150 155 160
 Arg Cys Pro Ser Glu Leu Ser Thr Lys Ser Glu Gln Ile Ser Asp Ala
 165 170 175
 Ala Ser Gly Leu Ala Gln Asp Glu Gln Pro His Pro Asn Leu Asn Leu
 180 185 190
 Asn Leu Glu Leu Ser Ile Ala Arg Ser Ser Val His Arg Val Ala Glu
 195 200 205
 Lys Glu Asp Val Val Asn Ser Gln Gln Gly Glu Ser Asn Leu Ser Glu
 210 215 220
 Gly Lys
 225

<210> 2257
 <211> 101
 <212> PRT
 <213> Pinus radiata

<400> 2257
 Met Gly Arg Ala Pro Cys Cys Ser Asn Gly Asp Arg Asn Lys Gly Ala
 1 5 10 15

Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Asn Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Cys Pro Asp
 50 55 60
 Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile Leu Lys
 65 70 75 80
 Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp
 100

<210> 2258

<211> 412

<212> PRT

<213> Pinus radiata

<400> 2258

Met Gly Arg Thr Pro Cys Cys Glu Lys Asn Ile Gly Leu Lys Lys Gly
 1 5 10 15
 Pro Trp Thr Pro Glu Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Ser
 20 25 30
 His Gly His Gly Ser Trp Arg Ala Leu Pro Lys Arg Ala Gly Leu Leu
 35 40 45
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro
 50 55 60
 Asp Ile Lys Arg Gly Gln Phe Ser Phe Glu Glu Glu Gln Thr Ile Ile
 65 70 75 80
 Glu Leu His Ala Val Leu Gly Asn Lys Trp Ser Thr Ile Ala Gly His
 85 90 95
 Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His
 100 105 110
 Leu Lys Lys Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His Arg
 115 120 125
 Pro Arg Thr Asp Leu Leu Ala Phe Ser Asn Ile Gln Ser Ser Ile Phe
 130 135 140
 Asn Thr Pro Gly Phe Gly His Met Ala Gln Trp Glu Ser Ala Arg Leu
 145 150 155 160
 Glu Ala Glu Ala Arg Leu Thr Gly Glu Tyr Leu Arg Gln Ala Leu Phe
 165 170 175
 Met Ala Gly Asn Gly Ser Ala Thr Ala Asp Leu Leu Met Arg Pro Cys
 180 185 190
 Lys Ser Glu Phe Gly Asn Asp Gln Phe Asn Leu Thr Lys Asn Met Gly
 195 200 205
 Asn Pro Pro Trp Ile Gln Gln Pro Gly Met Ala Leu Asp Tyr Lys Gly
 210 215 220
 Ala Val Pro Gln Ser Leu Glu Gln Phe Leu Gln Thr Asn Val Cys Ser
 225 230 235 240
 Ala Ser Asp Ile Asn Gly Gly Gly Cys Leu Ser His Glu Gly Gly Phe
 245 250 255
 Asn Ile Thr Lys Phe Ala Ser Pro Cys Ser Thr Leu Asp Gly Ile Gln
 260 265 270
 Ile Lys Thr Glu Pro Gln Ser Leu Cys Gly Pro Gln Val Lys Asn
 275 280 285
 Asp Ser Gln Phe Leu His Ser Glu Gly Asp Leu Arg Lys Gln Ala Met
 290 295 300
 Leu Asp Met Asn Val Gly Cys Asn Val Leu Ile Asn Met Asn Ala Glu
 305 310 315 320
 Ser Lys Val Ser Phe Gly His Asn Gly Ile Ile Thr Asp Gln Glu Tyr
 325 330 335

Asn Asn Leu Gly Gln Ile Asp Asn Asn Asn His Leu Ser His Ala Ala
 340 345
 Thr Thr Leu Trp Pro Val Glu Gly Gln Leu Gln Ala Ile Ala Ser Ala
 355 360
 Ser Met Pro Gly Leu Ile Ser Ser Thr Ser Cys Thr Ser Asn Asn Ile
 370 375 380
 Tyr Ser Gln Pro Gly Leu Ile Pro Leu Leu Asn Ser Thr Thr Ser Ser
 385 390 395 400
 Met Gly Asp Thr Asn Ser Tyr Arg Glu Ala Gln Pro
 405 410

<210> 2259

<211> 391

<212> PRT

<213> Pinus radiata

<400> 2259

Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
 20 25 30
 Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Asp
 50 55 60
 Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile Leu Arg
 65 70 75 80
 Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Met
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr His Leu
 100 105 110
 Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro
 115 120 125
 Leu Ser Glu Ser Glu Asp Ile Cys Ser Ser Pro Gly Asn Ser Glu Val
 130 135 140
 Ser Arg Lys Ser Gln Arg Glu Asn Asn Ala Glu Ile Pro Arg Lys Val
 145 150 155 160
 Ala Asp Gly Ala Val Asp Ile Gln Asp Lys Glu Asp Ile Thr Glu
 165 170 175
 Asp Gln Thr Ser Ala Gln Leu Pro Glu Asn Gln Leu Leu Glu Thr Ser
 180 185 190
 Asn Ser Gln Cys Pro Ser Val Ala Thr Asp Phe Val Pro Gln Ala Pro
 195 200 205
 Ser Ile Pro Ser Thr Ala Tyr Ser Phe Gln Gln Ser Thr Thr Ser Ser
 210 215 220
 Val Pro Gly Gly Val Ser Asp Ser Val Asp Val Asn His Asn Lys Gly
 225 230 235 240
 Ser Lys Gln Val Pro Phe Pro Leu Ser Asn Thr Ala Cys Phe Asn Ser
 245 250 255
 Ser Ala Gln Gly Val Ala Gly Asp Tyr Leu Asp Gln Tyr Leu Met Lys
 260 265 270
 Asn Leu Val Thr Asn Ser Asn Asp Leu Ile Thr Ser Thr Val Arg Leu
 275 280 285
 Ser Ser Ala Leu Gln Thr Ala Pro Phe Val Gly Gln Phe Asp Ser Asn
 290 295 300
 His Val Phe Met Ser Gly Asn Ala Ser Leu Asn Glu Lys His Gln Met
 305 310 315 320
 Pro Gln Asn Ser Gln Ala Leu Glu Met Asp Pro His His Ser Phe Ile
 325 330 335
 Ala His Pro Ser Glu Glu Gly Thr Tyr Asp Lys Leu Asn His Thr Arg
 340 345 350

Cys Ala Ala Ser Asp Gln Val Thr Ser Phe Asn Tyr Pro Tyr Leu Ile
 355 360 365
 Ser His Thr Val Thr Gly Ser Ala Leu Gly Asp Phe Asn Pro Asp Ile
 370 375 380
 Phe Pro Pro Phe Val Glu Ser
 385 390

<210> 2260
 <211> 144
 <212> PRT
 <213> Pinus radiata

<400> 2260
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
 20 25 30
 Gly Glu Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Ser Phe Thr Glu Glu Asp Glu Leu Ile Ile Lys
 65 70 75 80
 Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile
 100 105 110
 Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His Arg Pro
 115 120 125
 Leu Gly Gln Pro Asn Asn Thr Pro Val Thr Arg Pro Val Leu Glu His
 130 135 140

<210> 2261
 <211> 255
 <212> PRT
 <213> Pinus radiata

<400> 2261
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Asn Phe Ser Glu Glu Asp Glu Leu Val Ile Lys
 65 70 75 80
 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile
 100 105 110
 Lys Arg Lys Leu Leu Asn Arg Gly Leu Asp Pro Gln Ser His Arg Pro
 115 120 125
 Leu Gly Gln Pro His Asn Ser Asn Thr Thr Cys Pro Ser Leu Pro Ala
 130 135 140
 Leu Glu His Glu Ile Leu Val Phe Gln Arg Pro Arg Thr Pro Glu Ile
 145 150 155 160
 Ala Asp Phe Phe Gln Tyr Glu Arg Ser Glu Ser Ser Pro Met Glu Pro
 165 170 175
 Ala Thr Ser Lys Asp Ala Glu Glu His Pro Asp Leu Asn Leu Asp Leu

[illegible]

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<210> 2262
<211> 162
<212> PRT
<213> Pinus radiata
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Met Gly Thr Gly Glu																Met Gly Thr Pro Ala Lys Thr Thr Lys Ala Ser															
1 5																10 15															
Thr Pro Gln Glu Gln Pro Pro Thr Ser Thr Ala Met Leu Tyr Pro Asp																20 25 30															
Trp Ala Ala Ala Phe Gln Ala Tyr Tyr Asn Ser Gly Thr Thr Pro Pro																35 40 45															
Pro Pro Pro Ala Tyr Phe His Ser Ser Val Ala Ser Ser Pro Gln Pro																50 55 60															
His Pro Tyr Met Trp Gly Gly Gln Pro Leu Met Pro Pro Tyr Gly Thr																65 70 75															
Leu Pro Pro Pro Tyr Ala Ala Met Tyr His His Gly Ser Met Tyr Ala																80 85 90															
His Pro Ser Met Pro Pro Gly Ala His Pro Phe Ala Pro Tyr Val Met																95 100 105															
Thr Ser Ser Leu Ser Thr Thr Glu Gly Ala Pro Val Gly Thr Thr Ser																110 115 120															
Gly Ala Asp Ala Glu Gly Lys Pro Ser Glu Pro Lys Asp Gln Thr Leu																125 130 135															
Leu Lys Arg Ser Lys Gly Ser Leu Gly Ser Leu Asn Met Leu Thr Gly																140 145 150															
Lys Ile																155 160															

<210> 2263
<211> 193
<212> PRT
<213> Pinus radiata

<40> 2263																	
Met	Gly	Cys	Asn	Gln	5	Ser	Lys	Val	Glu	Ser	Glu	Glu	Glu	Val	Val	Lys	
1									10						15		
Ser	Lys	Glu	Arg	Lys	Gln	Phe	Met	Lys	Glu	Ser	Val	Ala	Ala	Arg	Asn		
			20					25						30			
Ala	Phe	Ala	Ala	Ala	His	Ser	Ala	Ser	Ile	Thr	Ser	Leu	Lys	Asn	Ile		
		35					40					45					
Gly	Ala	Ala	Leu	Asn	Asp	Tyr	Gly	Gln	Gly	Glu	Ser	Lys	Glu	Ser	Leu		
	50					55					60						
Ser	Gln	Gly	His	Leu	Pro	Val	Pro	His	Ile	Tyr	Gly	Asp	Pro	Leu	Pro		
65					70				75					80			
Pro	Ala	Pro	Pro	Leu	Pro	Pro	Leu	Leu	Pro	Pro	Pro	Arg	Pro	Asp	Glu		
				85					90					95			
His	Pro	Ala	Arg	Pro	Leu	Glu	Arg	Ser	Ala	Ser	Ala	Pro	Ala	Ile	Ala		
		100						105					110				
Leu	Gln	Gln	Gln	Ala	Glu	Glu	Asp	Arg	Asn	Pro	Glu	Ala	Asn	Ala	Gly		
		115					120					125					

Ala Ser Ile Pro Glu Gly Glu Glu Asp Glu Val Glu Glu Glu Asp
 130 135 140
 Glu His Leu Val Glu Val Ser His Ser Val Thr Ser Phe Asn Pro Pro
 145 150 155
 Pro Arg Pro Pro Pro Ser Ser Ser Glu Pro Pro Pro Pro Pro Leu Pro
 165 170 175
 Pro Leu Thr Asn Gln Trp Asp Phe Phe Asp Asp Asn Ser Tyr Phe Glu
 180 185 190
 Arg

<210> 2264
 <211> 128
 <212> PRT
 <213> Pinus radiata

<400> 2264
 Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Ala Thr Asn
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Gly Gly Leu Lys Lys Ala
 20 25 30
 Gln Glu Leu Ser Val Leu Cys Asn Ala Glu Val Ala Leu Ile Ile Phe
 35 40 45
 Ser Ser Thr Gly Lys Leu His Glu Trp Ser Ser Ser Ser Phe Phe
 50 55 60
 Met Leu Gln Lys Ser Met Lys Lys Ile Leu Glu Arg Tyr Gln Lys Ser
 65 70 75 80
 Glu Gln Gly Leu Gly Leu Met Asp Tyr Gln His Gln Gln Leu Leu Cys
 85 90 95
 Glu Met Arg Arg Ile Thr Lys Glu Asn Glu Ser Leu Gln Glu Arg Leu
 100 105 110
 Arg His Met Asn Gly Glu Glu Val Asn Ser Leu Lys Leu Pro Glu Leu
 115 120 125

<210> 2265
 <211> 181
 <212> PRT
 <213> Pinus radiata

<400> 2265
 Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
 35 40 45
 Ser Ser Arg Gly Lys Leu Tyr Glu Phe Gly Ser Ala Gly Met Leu Lys
 50 55 60
 Thr Leu Glu Arg Tyr Gln Lys Cys Ser Tyr Val Leu Gln Asp Ala Thr
 65 70 75 80
 Val Ser Asp Arg Glu Ala Gln Asn Trp His Gln Glu Val Gly Lys Leu
 85 90 95
 Lys Ala Arg Val Glu Leu Leu Gln Arg Ser Gln Arg His Leu Leu Gly
 100 105 110
 Glu Asp Leu Gly Pro Leu Ser Ile Lys Glu Leu Gln Gln Leu Glu Arg
 115 120 125
 Gln Leu Glu Val Ala Leu Thr His Val Arg Ser Arg Lys Thr Gln Val
 130 135 140
 Met Leu Glu Met Met Asp Glu Leu Arg Arg Lys Glu Arg Ile Leu Gln
 145 150 155 160
 Glu Val Asn Lys Ser Leu Arg Lys Lys Leu Gln Glu Ala Glu Gly Gln

165
 Ala Phe Asn Ala Met
 180

<210> 2266
 <211> 107
 <212> PRT
 <213> Pinus radiata

<400> 2266
 Met Asp Leu Met Glu Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg
 1 5 10 15
 Arg Thr Val Arg Gly Lys Thr Gln Leu Lys Arg Ile Glu Asn Gly Thr
 20 25 30
 Ser Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys
 35 40 45
 Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val
 50 55 60
 Phe Ser Pro Arg Gly Lys Arg Tyr Glu Phe Ala Asn Pro Ser Met Gln
 65 70 75 80
 Lys Met Leu Ala Arg Tyr Glu Asn Phe Ser Glu Gly Ser Lys Ala Thr
 85 90 95
 Ser Thr Ala Lys Glu Gln Asp Val Gln Gly Leu
 100 105

<210> 2267
 <211> 134
 <212> PRT
 <213> Pinus radiata

<400> 2267
 Ala Arg Gly Lys Thr Gln Met Arg Lys Ile Glu Ser Ala Thr Ser Arg
 1 5 10 15
 Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Met Lys Lys Ala Tyr
 20 25 30
 Glu Leu Ser Val Leu Cys Asp Ala Gln Leu Gly Leu Ile Val Phe Ser
 35 40 45
 Pro Arg Gly Lys Val Tyr Glu Phe Ser Ser Thr Cys Met Gln Lys Met
 50 55 60
 Leu Ala Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asp Thr Ser Thr Ser
 65 70 75 80
 Lys Glu Gln Asp Val Gln Cys Leu Lys Arg Glu Ser Ala Asn Met Glu
 85 90 95
 Glu Arg Ile Glu Ile Leu Glu Ser Met Gln Arg Lys Met Leu Gly Glu
 100 105 110
 Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln
 115 120 125
 Val Glu Arg Gly Leu Arg
 130

<210> 2268
 <211> 138
 <212> PRT
 <213> Pinus radiata

<400> 2268
 Met Gly Arg Gly Arg Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Asn
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe


```

          35              40              45
Ser Thr Arg Gly Lys Leu Tyr Glu Phe Ala Ser Ser Ser Met Asn Lys
 50      55      60
Thr Leu Glu Arg Tyr Glu Lys Cys Ser Tyr Ala Met Gln Asp Thr Thr
65      70      75      80
Gly Val Ser Asp Arg Glu Ala Gln Asn Trp His Gln Glu Val Thr Lys
      85      90      95
Leu Lys Gly Lys Val Glu Leu Leu Gln Arg Ser Gln Arg His Leu Leu
      100      105      110
Gly Glu Asp Leu Gly Pro Leu Asn Val Lys Glu Leu Gln Gln Leu Glu
      115      120      125
Arg Gln Leu Glu Val Ala Leu Thr His Leu
      130      135

```

<210> 2269
 <211> 141
 <212> PRT
 <213> Pinus radiata

```

          <400> 2269
Met Gly Lys Lys Lys Arg Val Glu Leu Lys Arg Ile Gln Asn Pro Ser Ser
 1      5      10      15
Arg His Ala Thr Phe Ser Lys Arg Lys Asn Gly Leu Leu Lys Lys Ala
      20      25      30
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
      35      40      45
Ser Glu Thr Gly Lys Ile Tyr Glu Phe Ala Ser Asn Asn Asp Met Ala
      50      55      60
Ala Ile Leu Gly Lys Tyr Arg Val His Glu Glu Gly Thr Glu Thr Ser
65      70      75      80
Ser Pro Thr Ser Leu Gln Asn Val Lys Tyr His Glu Ser Gly Leu Glu
      85      90      95
Lys Leu Gln Glu Lys Leu Thr Ala Leu Gln Lys Lys Glu Lys Asn Leu
      100      105      110
Ile Gly Glu Asp Leu Glu Val Leu Thr Met Lys Glu Leu Gln Arg Leu
      115      120      125
Glu Lys Gln Leu Gln Ile Gly Ile Lys Arg Leu Val Ile
      130      135      140

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<210> 2270
 <211> 135
 <212> PRT
 <213> Pinus radiata

```

          <400> 2270
Met Gly Lys Lys Lys Val Glu Val Lys Leu Ile Gln Asn Pro Thr Ser
 1      5      10      15
Arg Gln Gly Cys Phe Tyr Asn Arg Lys Cys Gly Leu Leu Lys Lys Ala
      20      25      30
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
      35      40      45
Ser Gln Thr Gly Lys Ile Tyr Glu Phe Ala Ser His Asp Asp Val Asn
      50      55      60
Ala Ile Leu Ala Lys Tyr Arg Ile Gln Thr Gly Thr Thr Thr Asn Ala
65      70      75      80
Met Pro Ser Ser Leu Gln Asn Thr Glu Pro Glu Thr Leu His Glu Glu
      85      90      95
Thr Asn Met Leu Gly Lys Arg Lys Lys Val Glu Lys Leu His Glu Lys
      100      105      110
Ile Asn Met Leu Glu Lys Arg Gly Lys Asn Met Val Gly Glu Asn Leu
      115      120      125

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Glu Ser Leu Thr Val Asn Glu
130 135

<210> 2271
<211> 118
<212> PRT
<213> Pinus radiata

<400> 2271
Met Ala Arg Gly Lys Thr Gln Met Lys Lys Ile Glu Asn Val Thr Ser
1 5 10 15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Ala
20 25 30
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Ile Val Phe
35 40 45
Ser Pro Ser Gly Lys Leu Tyr Glu Phe Ser Arg Pro Cys Met Gly Lys
50 55 60
Leu Leu Glu Lys Tyr Glu Lys Asn Ser Arg Glu Ser Gly Ile Asn Asn
65 70 75
Ala Ala Lys Glu Lys Asp Thr Gln His Ser Lys Arg Glu Ile Ala Asn
85 90 95
Met Glu Glu Lys Ile Arg Ile Leu Glu Ser Thr Glu Arg Lys Met Leu
100 105 110
Gly Gln Asn Leu Ala Ser
115

<210> 2272
<211> 147
<212> PRT
<213> Pinus radiata

<400> 2272
Met Asp Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg Arg Thr Val
1 5 10 15
Arg Gly Lys Thr Gln Met Lys Arg Ile Glu Asn Ala Thr Ser Arg Gln
20 25 30
Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Ala Tyr Glu
35 40 45
Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Met Val Phe Ser Pro
50 55 60
Arg Gly Lys Leu Tyr Glu Phe Ala Asn Pro Ser Met Gln Lys Met Leu
65 70 75
Glu Arg Tyr Glu Lys Cys Ser Glu Gly Ser Lys Thr Thr Ser Ile Ala
85 90 95
Lys Glu Glu Asp Pro Lys Ala Leu Lys Arg Glu Ile Ala Asn Met Glu
100 105 110
Glu Arg Ile Glu Ile Leu Glu Arg Thr Gln Arg Lys Met Leu Gly Glu
115 120 125
Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln
130 135 140
Val Glu Arg
145

<210> 2273
<211> 113
<212> PRT
<213> Pinus radiata

<400> 2273
Met Gly Arg Gly Lys Ile Glu Ile Lys Lys Ile Glu Asn Ser Val His
1 5 10 15

```

Arg Gln Val Thr Phe Cys Lys Arg Arg Gly Gly Leu Met Lys Lys Ala
      20      25
Tyr Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ala Leu Ile Val Phe
      35      40      45
Ser Ser Arg Gly Lys Leu Tyr Glu Leu Gly Thr Ser Asn Asn Asn
      50      55      60
Asn Ser Met Arg Ser Ile Leu Glu Arg Tyr Gln Lys Cys Ser Gln Thr
      65      70      75      80
Ala Lys His Met Asn Phe Ser Asn Asn Thr Ser Asp Glu Lys Met Lys
      85      90      95
Gln Glu Ile Asn Leu Leu Lys Gln Gln Ile Gly Ser Ala Lys Leu Thr
      100      105      110
Asn

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<210> 2274
<211> 97
<212> PRT
<213> Pinus radiata

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<400> 2274
Ser Trp Lys Ala Asn Pro Cys Thr Val Pro Ser Ser Arg Ile Gly Gly
 1      5      10      15
Phe Gly Gly Gly Gln Val Ile Leu Pro Leu Ala His Thr Val Glu His
      20      25      30
Glu Glu Phe Leu Glu Val Ile Lys Leu Glu Asn His Gly Leu Thr Gln
      35      40      45
Glu Glu Ala Leu Leu Ser Arg Asp Met Phe Leu Leu Gln Leu Cys Ser
      50      55      60
Gly Leu Asp Glu Asn Ala Val Gly Ala Cys Ala Glu Leu Val Phe Ala
      65      70      75      80
Pro Ile Asp Ala Ser Leu Ala Asp Ser Ser Pro Leu Leu Pro Ser Gly
      85      90      95
Phe

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```

<210> 2275
<211> 157
<212> PRT
<213> Pinus radiata

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```

<400> 2275
Ser Val Asp Val Leu Thr Ala Phe Ser Thr Gly Asn Gly Gly Thr Ile
 1      5      10      15
Glu Leu Leu Tyr Met Gln Met Tyr Ala Pro Thr Thr Leu Ala Ser Ala
      20      25      30
Arg Asp Phe Trp Thr Leu Arg Tyr Thr Ser Val Leu Glu Asp Gly Ser
      35      40      45
Leu Val Val Cys Glu Arg Ser Leu Ser Gly Thr Gln Gly Gly Pro Ser
      50      55      60
Met Pro Ala Val Gln Gln Phe Val Arg Ala Glu Met Gln Pro Ser Gly
      65      70      75      80
Tyr Leu Ile Arg Pro Cys Glu Gly Gly Gly Ser Leu Ile His Ile Val
      85      90      95
Asp His Met Asp Leu Glu Pro Trp Ser Val Pro Glu Val Leu Arg Pro
      100      105      110
Leu Tyr Glu Ser Ser Thr Val Leu Ala Gln Lys Val Thr Met Ser Ala
      115      120      125
Leu Arg His Leu Arg Gln Ile Ala Gln Glu Ala Ser Ser Asp Val Val
      130      135      140
Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Thr Phe

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145

150

155

<210> 2276
 <211> 327
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2276
 Met Val Ser Val Asn Pro Asn Pro Ala Gln Gly Phe Tyr Phe Phe Asp
 1 5 10 15
 Pro Ala Asn Thr Arg Ile His Gly Val Asn Ala Gly Ser Ala Ala Glu
 20 25 30
 Gly Gly Gly Ala Ala Pro Pro Tyr Ala Glu Asp Pro Ser Lys Lys Val
 35 40 45
 Arg Lys Pro Tyr Thr Ile Thr Lys Ser Arg Glu Ser Trp Thr Glu Gln
 50 55 60
 Glu His Asp Lys Phe Leu Glu Ala Leu His Leu Phe Asp Arg Asp Trp
 65 70 75 80
 Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr Val Ile Gln Ile Arg
 85 90 95
 Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln Lys Asn Gly Thr Ser
 100 105 110
 Glu His Val Pro Pro Pro Arg Pro Lys Arg Lys Ala Ala His Pro Tyr
 115 120 125
 Pro Gln Lys Ala Pro Lys Ala Pro Val Val Ser Gln Val Asn Gly Pro
 130 135 140
 Phe Gln Val Ser Ser Ala Phe Leu Glu Pro Gly His Ile Val Arg Pro
 145 150 155 160
 Asp Gly Ser Ala Leu Leu Gly Asn Ser Arg Thr Ser Val Ala Leu Ser
 165 170 175
 Ser Trp Ser His Asn Ser Val Pro Ala Met Ser Ala Ser Gln Gly Thr
 180 185 190
 Lys Asp Val Gly Ile Ser Gly Pro Val Pro Ser Asn Cys Cys Asn
 195 200 205
 Ser Ser Ser Asn Asp Ser Thr Pro Arg Ser Trp Pro Asn Ala Gln Ala
 210 215 220
 Ile Glu Pro Leu Asp Gln Gln Lys His Leu Arg Val Met Pro Asp Phe
 225 230 235 240
 Ala Gln Val Tyr Arg Phe Ile Gly Ser Val Phe Asp Pro Asp Ala Gly
 245 250 255
 Gly His Leu Gln Arg Leu Lys Gln Met Asp Pro Ile Asn Leu Glu Thr
 260 265 270
 Val Val Leu Leu Met Lys Asn Leu Ser Ala Asn Leu Thr Ser Pro Glu
 275 280 285
 Phe Glu Lys Tyr Gln His Gly Leu Phe Ala Ser Tyr Glu Gly Gly Pro
 290 295 300
 Glu Lys Ser Lys Ser Gly Gly Ser Phe Lys Leu Leu Pro Glu Lys Ser
 305 310 315 320
 Gly Ser Leu Ile Leu Ser Ala
 325

<210> 2277
 <211> 225
 <212> PRT
 <213> *Pinus radiata*

<400> 2277
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
 20 25 30

Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile Ile Lys
 65 70 75 80
 Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile
 100 105 110
 Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His Arg Pro
 115 120 125
 Leu Gly Gln Pro Asn Asn Thr Pro Val Thr Arg Pro Val Leu Glu His
 130 135 140
 Glu Ile Pro Ala Phe Gln Asn Pro Ala Thr Pro Glu Ile Ala Asp Leu
 145 150 155 160
 Leu Gln His His Arg Leu Glu Ser Ser Pro Ile Lys Pro Ala Ala Ser
 165 170 175
 Asp Ala Glu Glu His Pro Asp Leu Asn Leu Asn Leu Cys Ile Ser Leu
 180 185 190
 Pro Ser Asn Ser Ala Pro Ala Val Asn Arg Val Ser Ser Val Asp Thr
 195 200 205
 Thr Val Asp Ser Asn Ser Asn Ser Gly Asp Gly Leu Cys Trp Gln Phe
 210 215 220
 Leu
 225

<210> 2278

<211> 69

<212> PRT

<213> Pinus radiata

<400> 2278

Met Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg
 1 5 10 15
 Glu His Arg Ser Glu Trp Ala Asp Cys Asn Ile Asp Ala Tyr Ser Ser
 20 25 30
 Ala Thr Met Lys Ala Asn Ala Tyr Asn Val Pro Gly Ser Leu Gly Gly
 35 40 45
 Ile Thr Gly Ser Gln Val Ile Leu Pro Leu Ala His Thr Val Glu His
 50 55 60
 Glu Glu Phe Leu Glu
 65

<210> 2279

<211> 65

<212> PRT

<213> Eucalyptus grandis

<400> 2279

Met Ala Arg Phe Pro Arg Val Asp Lys Ser Asn Ser Lys Lys Thr Val
 1 5 10 15
 Lys Lys Gly Ala Trp Ser Ala Glu Asp Gln Lys Leu Val Ala Tyr
 20 25 30
 Ile Lys Arg Tyr Gly Ile Trp Asn Trp Thr His Met Ala Glu Pro Ala
 35 40 45
 Gly Leu Ala Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr
 50 55 60
 Leu
 65

<210> 2280
 <211> 39
 <212> PRT
 <213> Eucalyptus grandis

<400> 2280
 Pro Asn Ile Lys His Gly Asn Ile Thr Gln Glu Glu Glu Ile Ile
 1 5 10 15
 Ile Asn Leu His Arg Val Leu Gly Asn Arg Trp Ala Ser Ile Ala Ser
 20 25 30
 Arg Leu Ser Gly Arg Thr Asp
 35

<210> 2281
 <211> 59
 <212> PRT
 <213> Eucalyptus grandis

<400> 2281
 Arg Lys Pro Cys Asp Lys Gln Asp Thr Asn Lys Gly Ala Trp Ser
 1 5 10 15
 Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Arg Lys His Gly Glu
 20 25 30
 Gly Cys Trp Arg Thr Leu Pro Lys Ala Ala Gly Leu Leu Arg Cys Gly
 35 40 45
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50 55

<210> 2282
 <211> 48
 <212> PRT
 <213> Eucalyptus grandis

<400> 2282
 Pro Asp Leu Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile
 1 5 10 15
 Ile Lys Leu His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly
 20 25 30
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser
 35 40 45

<210> 2283
 <211> 19
 <212> PRT
 <213> Eucalyptus grandis

<400> 2283
 Cys Cys Ser Lys Lys Ala Val Lys Arg Gly Phe Trp Ser Pro Glu Glu
 1 5 10 15
 Asp Leu Lys

<210> 2284
 <211> 45
 <212> PRT
 <213> Eucalyptus grandis

<400> 2284
 Trp Thr Arg Glu Glu Asp Asn Leu Leu Ile His Ser Ile Thr Cys His
 1 5 10 15
 Gly Glu Gly Arg Trp Asn Met Leu Ala Lys Ser Ala Gly Leu Lys Arg

20 25 30
 Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
 35 40 45
 <210> 2285
 <211> 57
 <212> PRT
 <213> Eucalyptus grandis
 <400> 2285
 Arg Pro Asp Ile Lys Arg Gly Asn Leu Thr Pro Gln Glu Gln Leu Met
 1 5 10 15
 Ile Leu Glu Leu His His Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala
 20 25 30
 Gln Tyr Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg
 35 40 45
 Thr Arg Val Gln Lys Gln Ala Arg Gln
 50 55
 <210> 2286
 <211> 57
 <212> PRT
 <213> Eucalyptus grandis
 <400> 2286
 Met Ala Ser Arg Lys Glu Val Asp Arg Ile Lys Gly Pro Trp Ser Pro
 1 5 10 15
 Glu Glu Asp Glu Ala Leu Arg Leu Leu Val Gln Lys His Gly Pro Arg
 20 25 30
 Asn Trp Ser Leu Ile Ser Lys Ser Ile Pro Gly Arg Ser Gly Lys Ser
 35 40 45
 Cys Arg Leu Arg Trp Cys Asn Gln Leu
 50 55
 <210> 2287
 <211> 68
 <212> PRT
 <213> Eucalyptus grandis
 <400> 2287
 Ser Pro Gln Val Glu His Arg Ala Phe Thr Pro Glu Glu Asp Asp Ile
 1 5 10 15
 Ile Val Arg Ala His Ala Arg Phe Gly Asn Lys Trp Ala Thr Ile Ala
 20 25 30
 Arg Leu Leu Ser Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn
 35 40 45
 Ser Thr Leu Lys Arg Lys Cys Ser Pro Pro Leu Ser Pro Leu Ala Glu
 50 55 60
 Glu Gly Asn Asn
 65
 <210> 2288
 <211> 61
 <212> PRT
 <213> Eucalyptus grandis
 <400> 2288
 Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu
 1 5 10 15
 Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg Tyr Ile Thr Gln Tyr
 20 25 30

Gly His Gly Cys Trp Ser Ser Val Pro Lys Leu Ala Gly Leu Gln Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50 55 60

<210> 2289
 <211> 78
 <212> PRT
 <213> Eucalyptus grandis

<400> 2289
 Gly Ser Ser Pro Ile Asp Gly Ser Asp Gly Tyr Leu Ser Asp Asp Pro
 1 5 10 15
 Ala Pro Gly Ser Arg Ser Ser Asn Arg Arg Val Glu Arg Lys Lys Gly
 20 25
 Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile Gly Leu Gln
 35 40 45
 Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp Phe Val Thr
 50 55 60
 Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr
 65 70 75

<210> 2290
 <211> 53
 <212> PRT
 <213> Eucalyptus grandis

<400> 2290
 Lys Lys Gly Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile
 1 5 10 15
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp
 20 25 30
 Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45
 Tyr Tyr Ile Arg Gln
 50

<210> 2291
 <211> 59
 <212> PRT
 <213> Eucalyptus grandis

<400> 2291
 Arg Lys Pro Cys Cys Asp Lys Arg Asp Thr Asn Lys Gly Ala Trp Ser
 1 5 10 15
 Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Lys His Gly Glu
 20 25 30
 Gly Ser Trp Arg Thr Leu Pro Gln Ala Ala Gly Leu Leu Arg Cys Gly
 35 40 45
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50 55

<210> 2292
 <211> 65
 <212> PRT
 <213> Eucalyptus grandis

<400> 2292
 Pro Asp Leu Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile
 1 5 10 15
 Ile Lys Leu His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly


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      20      25      30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser
      35      40      45
His Leu Arg Arg Lys Leu Leu Lys Met Gly Ile Asp Pro Asn Asn His
      50      55      60

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Arg
65

<210> 2293
<211> 54
<212> PRT
<213> Eucalyptus grandis

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      20      25      30
Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
      1      5      10      15
Trp Thr Lys Glu Glu Asp Gln Arg Leu Ile Asp Tyr Ile Arg Leu His
      20      25      30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ser Ala Gly Leu Leu Arg
      35      40      45
Cys Gly Lys Ser Cys Arg
      50

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<210> 2294
<211> 65
<212> PRT
<213> Eucalyptus grandis

```

      20      25      30
Met Ala Arg Phe Pro Arg Val Asp Lys Ser Asn Ser Lys Lys Thr Val
      1      5      10      15
Lys Lys Gly Ala Trp Ser Ala Glu Glu Asp Gln Lys Leu Val Ala Tyr
      20      25      30
Ile Lys Arg Tyr Gly Ile Trp Asn Trp Thr His Met Ala Glu Pro Ala
      35      40      45
Gly Leu Ala Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr
      50      55      60

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Leu
65

<210> 2295
<211> 40
<212> PRT
<213> Eucalyptus grandis

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      20      25      30
Arg Pro Asn Ile Lys His Gly Asn Ile Thr Gln Glu Glu Glu Ile
      1      5      10      15
Ile Ile Asn Leu His Arg Val Leu Gly Asn Arg Trp Ala Ser Ile Ala
      20      25      30
Ser Arg Leu Ser Gly Arg Thr Asp
      35      40

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<210> 2296
<211> 41
<212> PRT
<213> Eucalyptus grandis

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      20      25      30
Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Met
      1      5      10      15

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Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn
20 25 30
Tyr Val Thr Thr Arg Thr Pro Thr Gln
35 40

<210> 2297

<211> 31

<212> PRT

<213> Eucalyptus grandis

<400> 2297

Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Met
1 5 10 15
Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg
20 25 30

<210> 2298

 $\langle 211 \rangle$ 44

<212> PRT

<213> Eucalyptus grandis

<400> 2298

Glu	Val	Arg	Lys	Gly	Pro	Trp	Thr	Glu	Gln	Glu	Asp	Phe	Gln	Leu	Val
1				5				10						15	
Cys	Phe	Val	Gly	Leu	Phe	Gly	Asp	Arg	Arg	Trp	Asp	Phe	Ile	Ala	Lys
			20					25					30		
Val	Ser	Gly	Leu	Lys	Val	Ala	Gly	Glu	Asn	Asn	Arg				
		35					40								

<210> 2299

<211> 61

<212> PRT

<213> Eucalyptus grandis

<400> 2299

Met	Gly	Arg	Ser	Pro	Cys	Cys	Glu	Ser	Glu	His	Met	Asn	Lys	Gly	Ala
1				5				10					15		
Trp	Ser	Lys	Glu	Glu	Asp	Glu	Arg	Leu	Ile	Ala	Tyr	Ile	Lys	Arg	His
			20					25					30		
Gly	Glu	Gly	Cys	Trp	Arg	Ser	Leu	Pro	Lys	Ala	Ala	Gly	Leu	Leu	Arg
		35					40					45			
Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile	Asn	Tyr	Leu			
	50					55					60				

<210> 2300

$\langle 211 \rangle$ 67

<212> PRT

<213> Eucalyptus grandis

<400> 2300

[illegible]

<210> 2301
 <211> 50
 <212> PRT
 <213> Eucalyptus grandis

<400> 2301
 Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu
 1 5 10 15
 Gly Leu Gln Lys Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn
 20 25 30
 Phe Val Lys Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45
 Tyr Phe
 50

<210> 2302
 <211> 53
 <212> PRT
 <213> Eucalyptus grandis

<400> 2302
 Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu
 1 5 10 15
 Gly Leu Gln Lys Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn
 20 25 30
 Phe Val Lys Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45
 Tyr Phe Leu Arg Arg
 50

<210> 2303
 <211> 64
 <212> PRT
 <213> Eucalyptus grandis

<400> 2303
 Met Ala Ser Ser Ser Val Ala Ser Ala Arg Lys Asp Ala Asp Arg
 1 5 10 15
 Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp Glu Ala Leu Gln Arg Leu
 20 25 30
 Val Gln Ser Tyr Gly Pro Arg Asn Trp Ser Leu Ile Ser Lys Ser Ile
 35 40 45
 Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu
 50 55 60

<210> 2304
 <211> 98
 <212> PRT
 <213> Eucalyptus grandis

<400> 2304
 Ser Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Glu Ala
 1 5 10 15
 Ile Val Arg Ala His Ala Arg Phe Gly Asn Lys Trp Ala Thr Ile Ala
 20 25 30
 Arg Leu Leu Asn Gly Arg Thr Asp Asn Ala Val Lys Asn His Trp Asn
 35 40 45
 Ser Thr Leu Lys Arg Lys Cys Ser Ser Thr Cys Ser Ala Gly Gly Asp
 50 55 60
 Asp Ala Asp Ala Leu Ala Glu Gln Gln Pro Leu Lys Arg Ser Ala Ser
 65 70 75 80

Leu Gly Thr Pro Thr Gly Gly Asn Asn Ala Val Ser Asp Leu Phe Phe
 85 90 95
 Ser Pro

<210> 2305
 <211> 50
 <212> PRT
 <213> Eucalyptus grandis

<400> 2305
 Leu Arg Lys Gly Leu Trp Ser Pro Glu Glu Asp Asp Lys Leu Met Asn
 1 5 10 15
 Tyr Met Leu Asn Asn Gly Gln Gly Cys Trp Ser Asp Val Ala Arg Asn
 20 25 30
 Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn
 35 40 45
 Tyr Leu
 50

<210> 2306
 <211> 60
 <212> PRT
 <213> Eucalyptus grandis

<400> 2306
 Pro Asp Leu Lys Arg Gly Ala Phe Ser Pro Gln Glu Glu Glu Leu Ile
 1 5 10 15
 Ile His Leu His Ser Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala
 20 25 30
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe Thr Asn Ser
 35 40 45
 Thr Ile Lys Lys Arg Ser Arg Thr Arg His His Leu
 50 55 60

<210> 2307
 <211> 44
 <212> PRT
 <213> Eucalyptus grandis

<400> 2307
 Lys Leu Asp Phe Ser Glu Asp Glu Glu Thr Leu Val Ile Arg Met Tyr
 1 5 10 15
 Asn Leu Val Gly Glu Arg Trp Ser Leu Ile Ala Gly Arg Ile Pro Gly
 20 25 30
 Arg Thr Ala Glu Glu Ile Glu Lys Tyr Trp Asn Ser
 35 40

<210> 2308
 <211> 61
 <212> PRT
 <213> Eucalyptus grandis

<400> 2308
 Met Gly Arg Gln Pro Cys Cys Asp Lys Leu Gly Val Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Ala Glu Glu Asp Arg Lys Leu Val Asn Phe Ile Leu Thr His
 20 25 30
 Gly Gln Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu

50

55

60

<210> 2309
 <211> 64
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2309
 Pro Asp Leu Lys Arg Gly Leu Leu Asn Glu Ala Glu Glu Ser Leu Val
 1 5 10 15
 Ile Asp Leu His Ala Thr Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala
 20 25 30
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr
 35 40 45
 His Ile Lys Lys Lys Leu Ile Arg Met Gly Ile Asp Pro Val Thr His
 50 55 60

<210> 2310
 <211> 61
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2310
 Met Gly Arg Gln Pro Cys Cys Asp Lys Ser Gly Val Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Ala Glu Glu Asp Lys Lys Leu Ile Asn Phe Ile Leu Thr Asn
 20 25 30
 Gly His Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu
 50 55 60

<210> 2311
 <211> 67
 <212> PRT
 <213> *Eucalyptus grandis*

<400> 2311
 Pro Asp Leu Lys Arg Gly Leu Leu Ser Glu Ala Glu Glu Gln Leu Val
 1 5 10 15
 Ile Asp Leu His Ala Arg Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala
 20 25 30
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr
 35 40 45
 His Ile Lys Lys Lys Leu Leu Lys Met Gly Ile Asp Pro Val Thr His
 50 55 60
 Glu Pro Leu
 65

<210> 2312
 <211> 50
 <212> PRT
 <213> *Pinus radiata*

<400> 2312
 Lys Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr
 1 5 10 15
 Gly Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn
 20 25 30
 Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45

Tyr Phe
50

<210> 2313
<211> 53
<212> PRT
<213> Pinus radiata

<400> 2313
Lys Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr
1 5 10 15
Gly Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn
20 25 30
Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
35 40 45
Tyr Phe Leu Arg Gln
50

<210> 2314
<211> 60
<212> PRT
<213> Pinus radiata

<400> 2314
Gly Lys Ser Pro Gly His Asp Glu Pro Asp Arg Ile Lys Gly Pro Trp
1 5 10 15
Ser Pro Glu Glu Asp Ala Ala Leu Gln His Phe Val Gln Lys Tyr Gly
20 25 30
Pro Arg Asn Trp Ser Leu Ile Ser Lys Ala Ile Pro Gly Arg Ser Gly
35 40 45
Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser
50 55 60

<210> 2315
<211> 60
<212> PRT
<213> Pinus radiata

<400> 2315
Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Ala Thr Ile
1 5 10 15
Val Arg Ala His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg
20 25 30
Met Leu Ser Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser
35 40 45
Thr Leu Arg Arg Arg Cys Gln Gly Gly Gly Ala Leu
50 55 60

<210> 2316
<211> 20
<212> PRT
<213> Pinus radiata

<400> 2316
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Val
1 5 10 15
Gly Leu Gln Arg
20

<210> 2317
<211> 18

<212> PRT
<213> Pinus radiata

<400> 2137
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Val
1 5 10 15
Gly Leu

<210> 2318
<211> 10
<212> PRT
<213> Pinus radiata

<400> 2318
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu
1 5 10

<210> 2319
<211> 14
<212> PRT
<213> Pinus radiata

<400> 2319
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe
1 5 10

<210> 2320
<211> 68
<212> PRT
<213> Pinus radiata

<400> 2320
Met Arg Cys Thr Arg Trp Gln Gly Leu Pro Phe Ser Ser Lys Pro Lys
1 5 10 15
Val Lys Lys Gly Leu Trp Ser Pro Glu Glu Asp Glu Lys Leu Ile Asn
20 25 30
Tyr Met Met Lys Asn Gly Leu Leu Gly Cys Ser Trp Ser Tyr Val Ala
35 40 45
Lys Gln Ile Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp
50 55 60
Thr Asn Tyr Leu
65

<210> 2321
<211> 62
<212> PRT
<213> Pinus radiata

<400> 2321
Met Gly Arg Ala Pro Cys Cys Asp Lys Ala Asn Val Lys Lys Gly Pro
1 5 10 15
Trp Ser Pro Glu Glu Asp Thr Lys Leu Lys Ala Phe Ile Glu Gln His
20 25 30
Gly Thr Gly Gly Asn Trp Ile Ala Leu Pro Gln Lys Ala Gly Leu Lys
35 40 45
Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
50 55 60

<210> 2322
<211> 60

<212> PRT

<213> Pinus radiata

<400> 2322

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Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1           5           10          15
Trp Thr Lys Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
 20          25          30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
 35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr
 50          55          60

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<210> 2323

<211> 46

<212> PRT

<213> Pinus radiata

<400> 2323

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Arg Pro Asp Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu
 1           5           10          15
Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala
 20          25          30
Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
 35          40          45

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<210> 2324

<211> 61

<212> PRT

<213> Pinus radiata

<400> 2324

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Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro
 1           5           10          15
Trp Thr Pro Glu Glu Asp Gln Lys Leu Leu Ala Tyr Ile Gln Glu His
 20          25          30
Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Leu Leu Arg
 35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu
 50          55          60

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<210> 2325

<211> 61

<212> PRT

<213> Pinus radiata

<400> 2325

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Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1           5           10          15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
 20          25          30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
 35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50          55          60

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<210> 2326

<211> 45

<212> PRT

<213> Pinus radiata

<400> 2326
 Pro Asp Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val
 1 5 10 15
 Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly
 20 25 30
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
 35 40 45

<210> 2327
 <211> 50
 <212> PRT
 <213> Pinus radiata

<400> 2327
 Lys Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu
 1 5 10 15
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn
 20 25 30
 Phe Val Ile Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45
 Tyr Phe
 50

<210> 2328
 <211> 53
 <212> PRT
 <213> Pinus radiata

<400> 2328
 Lys Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu
 1 5 10 15
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn
 20 25 30
 Phe Val Ile Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys
 35 40 45
 Tyr Phe Ile Arg Gln
 50

<210> 2329
 <211> 48
 <212> PRT
 <213> Pinus radiata

<400> 2329
 Gln Arg Glu Arg Trp Ser Glu Asp Glu His Leu Lys Phe Leu Glu Ala
 1 5 10 15
 Leu Lys Met Tyr Gly Arg Ala Trp Arg Arg Ile Glu Glu His Ile Gly
 20 25 30
 Thr Lys Thr Ala Val Gln Ile Arg Ser His Ala Gln Lys Phe Phe Ser
 35 40 45

<210> 2330
 <211> 42
 <212> PRT
 <213> Pinus radiata

<400> 2330
 Gln Arg Glu Arg Trp Ser Glu Asp Glu His Leu Lys Phe Leu Glu Ala
 1 5 10 15
 Leu Lys Met Tyr Gly Arg Ala Trp Arg Arg Ile Glu Glu His Ile Gly
 20 25 30

Thr Lys Thr Ala Val Gln Ile Arg Ser His
 35 40

<210> 2331
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 2331
 Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
 20 25 30
 Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu
 50 55 60

<210> 2332
 <211> 67
 <212> PRT
 <213> Pinus radiata

<400> 2332
 Pro Asp Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile
 1 5 10 15
 Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly
 20 25 30
 Arg Met Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr
 35 40 45
 His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His
 50 55 60
 Lys Pro Leu
 65

<210> 2333
 <211> 55
 <212> PRT
 <213> Pinus radiata

<400> 2333
 Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp
 1 5 10 15
 Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr Gly Pro Arg Asn Trp Thr
 20 25 30
 Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu
 35 40 45
 Arg Trp Cys Asn Gln Leu Ser
 50 55

<210> 2334
 <211> 56
 <212> PRT
 <213> Pinus radiata

<400> 2334
 Lys Gly Pro Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val
 1 5 10 15
 Gln Lys Tyr Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro
 20 25 30
 Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser

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35                                40                                45
Pro Gln Val Glu His Arg Pro Phe
50                                55

<210> 2335
<211> 34
<212> PRT
<213> Pinus radiata

<400> 2335
Met Gly Ala Pro Lys Gln Lys Trp Thr Ser Glu Glu Glu Gly Ala Leu
1          5          10          15
Arg Ala Gly Val Glu Lys Tyr Gly Ala Gly Lys Trp Gln Thr Ile Leu
20          25          30
Lys Asp

<210> 2336
<211> 51
<212> PRT
<213> Pinus radiata

<400> 2336
Leu Arg Lys Gly Leu Trp Ser Pro Asp Glu Asp Ile Glu Leu Thr Thr
1          5          10          15
Tyr Ile Met Arg Lys Gly Leu Met Gly Cys Trp Asn Tyr Ile Ala Lys
20          25          30
Gln Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile
35          40          45
Asn Tyr Leu
50

<210> 2337
<211> 45
<212> PRT
<213> Pinus radiata

<400> 2337
Pro Gly Leu Lys Arg Cys Ala Ile Ser Pro Gln Glu Glu Arg Leu Ile
1          5          10          15
Ile Gln Leu Gln Ser Ser Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala
20          25          30
His Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr
35          40          45

<210> 2338
<211> 62
<212> PRT
<213> Pinus radiata

<400> 2338
Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
1          5          10          15
Trp Thr Gln Gln Glu Asp Thr Arg Leu Val Ala His Ile Arg Ala His
20          25          30
Gly Gln Gly Gly Trp Ser Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
35          40          45
Cys Gly Lys Ser Cys Arg Gln Arg Trp Ile Asn Tyr Leu His
50          55          60

<210> 2339

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<211> 39
 <212> PRT
 <213> Pinus radiata

<400> 2339
 Pro Asp Leu Lys Arg Ser Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile
 1 5 10 15
 Val Arg Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly
 20 25 30
 Arg Leu Pro Gly Arg Thr Asp
 35

<210> 2340
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 2340
 Gly Thr His Pro Ala Pro Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp
 1 5 10 15
 Ser Pro Val Glu Asp Asn Gln Leu Thr Asn Tyr Ile Leu Arg Arg Gly
 20 25 30
 Leu Val Gly Cys Trp Asn Tyr Val Ala Lys Gln Ala Gly Leu Gln Arg
 35 40 45
 Thr Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50 55 60

<210> 2341
 <211> 43
 <212> PRT
 <213> Pinus radiata

<400> 2341
 Pro Gly Leu Lys Arg His Pro Ile Ser Arg Gln Glu Glu Gln Leu Ile
 1 5 10 15
 Ile Glu Leu Gln Ser Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala
 20 25 30
 Gln Leu Pro Gly Arg Thr Asp Ile Glu Ile Lys
 35 40

<210> 2342
 <211> 61
 <212> PRT
 <213> Eucalyptus grandis

<400> 2342
 Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu
 1 5 10 15
 Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg His Ile Ser Gln Tyr
 20 25 30
 Gly His Gly Cys Trp Ser Ser Val Pro Lys Gln Ala Gly Leu Gln Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50 55 60

<210> 2343
 <211> 67
 <212> PRT
 <213> Eucalyptus grandis

<400> 2343

Pro Asp Leu Lys Arg Gly Ala Phe Ser Gln Asp Glu Glu Asp Leu Ile
 1 5 10 15
 Ile Glu Leu His Ala Ala Leu Gly Asn Lys Trp Ser Gln Ile Ala Ala
 20 25 30
 Asn Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Leu Trp Asn Ser
 35 40 45
 Cys Leu Lys Lys Lys Leu Arg Gln Arg Gly Ile Asp Pro Val Ser His
 50 55 60
 Arg Pro Leu
 65

<210> 2344
 <211> 58
 <212> PRT
 <213> Eucalyptus grandis

<400> 2344
 Thr Pro Cys Cys Ser Lys Val Gly Ile Lys Arg Gly Pro Trp Thr Pro
 1 5 10 15
 Glu Glu Asp Glu Val Leu Ala Ser Tyr Val Arg Arg Glu Gly Glu Gly
 20 25 30
 Arg Trp Arg Thr Leu Pro Lys Arg Ala Gly Leu Gln Arg Cys Gly Lys
 35 40 45
 Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu
 50 55

<210> 2345
 <211> 67
 <212> PRT
 <213> Eucalyptus grandis

<400> 2345
 Pro Ser Val Lys Arg Gly Gln Ile Ala Pro Asp Glu Glu Asp Leu Ile
 1 5 10 15
 Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly
 20 25 30
 Arg Ile Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
 35 40 45
 His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His
 50 55 60
 Lys Pro Leu
 65

<210> 2346
 <211> 67
 <212> PRT
 <213> Eucalyptus grandis

<400> 2346
 Met Asp Lys Lys Lys Pro Asp Asp Asp Ser Gly Lys Ser Gln Asp Val Glu
 1 5 10 15
 Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn
 20 25 30
 Tyr Ile Ala Asn His Gly Glu Gly Ser Trp Asn Ser Leu Ala Lys Ala
 35 40 45
 Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn
 50 55 60
 Tyr Leu Arg
 65

<210> 2347

<211> 56
 <212> PRT
 <213> Eucalyptus grandis

<400> 2347
 Pro Asp Val Arg Arg Gly Asn Ile Thr Thr Glu Glu Gln Leu Leu Ile
 1 5 10 15
 Met Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala Lys
 20 25 30
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe Trp Arg Thr
 35 40 45
 Arg Ile Gln Lys His Ile Lys Gln
 50 55

<210> 2348
 <211> 63
 <212> PRT
 <213> Eucalyptus grandis

<400> 2348
 Met Asp Lys Lys Pro Cys Tyr Arg Thr Gln Asp Pro Gln Val Arg Lys
 1 5 10 15
 Gly Pro Trp Thr Leu Glu Glu Asp Leu Ile Leu Met Asp Tyr Ile Ala
 20 25 30
 Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ala Gly Leu
 35 40 45
 Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
 50 55 60

<210> 2349
 <211> 54
 <212> PRT
 <213> Eucalyptus grandis

<400> 2349
 Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu Ile
 1 5 10 15
 Ile His Leu Gln Ser Met Trp Gly Asn Arg Trp Ser Glu Ile Ala Lys
 20 25 30
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg Thr
 35 40 45
 Lys Ile Gln Lys His Ile
 50

<210> 2350
 <211> 47
 <212> PRT
 <213> Eucalyptus grandis

<400> 2350
 Ser Arg Glu Ser Trp Thr Glu Gln Glu His Asp Lys Phe Leu Glu Ala
 1 5 10 15
 Leu His Leu Phe Asp Arg Asp Trp Lys Ile Glu Ala Phe Val Gly
 20 25 30
 Ser Lys Thr Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe
 35 40 45

<210> 2351
 <211> 59
 <212> PRT
 <213> Eucalyptus grandis

<400> 2351
 Ser Trp Thr Glu Gln Glu His Asp Lys Phe Leu Glu Ala Leu His Leu
 1 5 10 15
 Phe Asp Arg Asp Trp Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr
 20 25 30
 Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln
 35 40 45
 Lys Asn Gly Thr Ser Glu His Val Pro Pro Pro
 50 55

<210> 2352
 <211> 45
 <212> PRT
 <213> Pinus radiata

<400> 2352
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
 20 25 30
 Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly
 35 40 45

<210> 2353
 <211> 45
 <212> PRT
 <213> Pinus radiata

<400> 2353
 Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His
 20 25 30
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly
 35 40 45

<210> 2354
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 2354
 Met Gly Arg Ser Pro Cys Cys Ala Lys Glu Gly Leu Asn Arg Gly Ala
 1 5 10 15
 Trp Thr Lys Thr Glu Asp Ile Ile Leu Ser Glu Tyr Ile Arg Ile His
 20 25 30
 Gly Asp Gly Gly Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Lys Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu
 50 55 60

<210> 2355
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 2355
 Met Gly Arg Ala Pro Cys Cys Ser Asn Asp Asp Arg Asn Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His

```

      20      25      30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
      35      40      45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50      55      60

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<210> 2356
 <211> 68
 <212> PRT
 <213> Pinus radiata

```

      20      25      30
Pro Asp Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile
  1      5      10      15
Leu Lys Leu His Ala Leu Leu Gly Asn Asn Arg Trp Ser Leu Ile Ala
      20      25      30
Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn
      35      40      45
Ser His Leu Lys Arg Lys Leu Ile Ser Met Gly Ile Asp Pro Leu Thr
      50      55      60
His Arg Pro Phe
65

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<210> 2357
 <211> 61
 <212> PRT
 <213> Pinus radiata

```

      20      25      30
Met Gly Arg Ala Pro Cys Cys Ser Asn Gly Asp Arg Asn Lys Gly Ala
  1      5      10      15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Val His
      20      25      30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Asn Ala Ala Gly Leu Leu Arg
      35      40      45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50      55      60

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<210> 2358
 <211> 39
 <212> PRT
 <213> Pinus radiata

```

      20      25      30
Pro Asp Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile
  1      5      10      15
Leu Lys Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly
      20      25      30
Arg Leu Pro Gly Arg Thr Asp
35

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<210> 2359
 <211> 62
 <212> PRT
 <213> Pinus radiata

```

      20      25      30
Met Gly Arg Thr Pro Cys Cys Glu Lys Asn Ile Gly Leu Lys Lys Gly
  1      5      10      15
Pro Trp Thr Pro Glu Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Ser
      20      25      30

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His Gly His Gly Ser Trp Arg Ala Leu Pro Lys Arg Ala Gly Leu Leu
 35 40 45
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu
 50 55 60

<210> 2360
 <211> 66
 <212> PRT
 <213> Pinus radiata

<400> 2360
 Pro Asp Ile Lys Arg Gly Gln Phe Ser Phe Glu Glu Glu Gln Thr Ile
 1 5 10 15
 Ile Glu Leu His Ala Val Leu Gly Asn Lys Trp Ser Thr Ile Ala Gly
 20 25 30
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
 35 40 45
 His Leu Lys Lys Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His
 50 55 60
 Arg Pro
 65

<210> 2361
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 2361
 Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
 20 25 30
 Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu
 50 55 60

<210> 2362
 <211> 67
 <212> PRT
 <213> Pinus radiata

<400> 2362
 Pro Asp Val Lys His His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile
 1 5 10 15
 Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly
 20 25 30
 Arg Met Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr
 35 40 45
 His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His
 50 55 60
 Lys Pro Leu
 65

<210> 2363
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 2363
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala

```

      1           5           10           15
Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
      20           25           30
Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
      35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50           55           60

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<210> 2364
 <211> 67
 <212> PRT
 <213> Pinus radiata

```

      <400> 2364
Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile
      1           5           10           15
Ile Lys Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly
      20           25           30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
      35           40           45
His Ile Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His
      50           55           60
Arg Pro Leu
      65

```

<210> 2365
 <211> 61
 <212> PRT
 <213> Pinus radiata

```

      <400> 2365
Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
      1           5           10           15
Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
      20           25           30
Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
      35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50           55           60

```

<210> 2366
 <211> 67
 <212> PRT
 <213> Pinus radiata

```

      <400> 2366
Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile
      1           5           10           15
Ile Lys Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly
      20           25           30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
      35           40           45
His Ile Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His
      50           55           60
Arg Pro Leu
      65

```

<210> 2367
 <211> 61
 <212> PRT
 <213> Pinus radiata

```

<400> 2367
Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1          5          10          15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
          20          25          30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
          35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
          50          55          60

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<210> 2368
<211> 67
<212> PRT
<213> Pinus radiata

```

```

<400> 2368
Pro Asp Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val
 1          5          10          15
Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly
          20          25          30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
          35          40          45
His Ile Lys Arg Lys Leu Leu Asn Arg Gly Leu Asp Pro Gln Ser His
          50          55          60
Arg Pro Leu
65

```